

The Mining Journal

AND ATMOSPHERIC RAILWAY GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 541.—Vol. XVI.]

LONDON: SATURDAY, JANUARY 3, 1846.

[Price 6d.]

GEORGE CARNE respectfully announces that the **SIXTH PERIODICAL SALE** for SHARES will be held on **MONDAY, the 5th January, at the Mart, Bedford-street, Plymouth, at Six o'clock** in the evening precisely.

MINE SHARES.

West Caradon
Gardons Consols
West Haverhill
West East Cornwall
West Wheal Maria
Wheal Fortescue
Mavy Consols
Wheal St. Cleer
Wheal Elizabeth
North Wheal Robert
St. Austell Consols
East Crover
Wheal Top
Bath Tolgus
West United Hills

Wheal Cleveland

PUBLIC COMPANIES.
Barnstaple and Plymouth
Barnstaple and Plymouth
Barnstaple and Plymouth
Barnstaple and Plymouth

RAILWAYS.

South Devon
Aristol and Exeter
North British Extension
Cornwall
Direct London & Manx. (Rastrick's)

The Seventh Periodical Sale will be on Monday, the 19th inst.

LEAD MINE FOR SALE.—The **BELGRAVE MINE**, in **DENBIGHSHIRE**, distant about four miles from the town of Mold. TO BE SOLD BY AUCTION, by Mr. C. WATSON, at the Auction Mart, opposite the Bank of England, on Wednesday, January 7, 1846, at Twelve o'clock, unless previously disposed of by private contract. LEASE of the above MINE, with all the BUILDINGS, ENGINES, PITWORK, and MACHINERY, and the STOCK of MATERIALS on the MINE. The working of this promising mine has ceased, and it is now OFFERED FOR SALE, in consequence of the death of the late proprietor. It is held under the Marquis of Westminster, at 15s. per ton royalty, whilst the price of the lead is under £15 per ton, and 20s. per ton when the price of lead is above that sum, for a lease of twenty-one years, from 1st of May, 1845. An adit, or day level, is carried into the heart of the mine, at a depth of 100 fathoms; and a further depth of twenty fathoms below that has only yet been reached. A large engine-power is erected upon the mine, and a small additional outlay only is required to bring the mine into a state of returns. The whole will be upon very moderate terms, and with immediate possession.

Reference may be made to Mr. John Taylor, Junr., Coal Dg., near Mold, who will give every information as to the state and prospects of the mine, and orders for its inspection, and who is authorised to treat with parties desiring to purchase; or to Mr. C. Watson, auctioneer and estate agent, 38, Threadneedle-street.

STEAM-ENGINE FOR SALE.—A NEW HIGH-PRESSURE PORTABLE STEAM-ENGINE, of 22-horse power, and 4-feet stroke; the beam supported upon four pillars, with fly-wheel and shaft, and two NEW BOILERS, of four tons each. This engine is well calculated for winding or driving any description of machinery, it having originally been intended for a tin mill, to assist the water-power. Apply to Mr. Joseph Mayhew, Foundry, Llanelli.—Dec. 30, 1845.

TO LEAD OR COPPER SMELTERS, FOUNDERS, &c.—GARMARTHENSHERE.—TO BE LET, with immediate possession, three very desirable PREMISES, known as the **YENCOED LEAD WORKS**, situated three miles from the town of Llanelli, on the side of the Llanelli and Llandovery Railway, with the navigable River Loughor bounding them on the south; any extent of frontage for the deposit of slag would be included in the letting. The buildings, with steam-engine, boiler, and machinery, are very compact, and in excellent repair. For permission to view, apply to F. L. Brown, Esq., solicitor, Llanelli, or to Mr. C. Watson, auctioneer and estate agent, 38, Threadneedle-street.

TO ENGINEERS, MILLWRIGHTS, &c.—A particularly eligible opportunity now presents itself to any person or persons desirous of entering into an ESTABLISHED BUSINESS in this LINE, in a large market town in Yorkshire, in the midst of a densely-populated manufacturing neighbourhood, where at present little competition exists. The concern includes an excellent foundry, convenient both for water and land carriage, is at present in full work, and in the hands of parties who are anxious to retire from the business. Satisfactory reasons for which and other particulars may be known, by application to the owners, Messrs. Arncliffe and Kaye, millwrights, Huddersfield.

TO RAILWAY CONTRACTORS, COLLIERY OWNERS, ENGINEERS, AND OTHERS.—THE PATENT VEGETABLE GREASE, at REDUCED PRICE, 12s. per cwt. for cash.—The quality the same as that formerly sold at 15s. per cwt.—JAMES THOMAS FITZ, respectfully requests his friends who have patronised him during the last ten years, and trusts, by strict attention to the quality of the article, and promptness in completing orders, to merit the continuance of their favours.—Orders, stating by what conveyance, addressed to J. T. Fitz, Swan Mead, Burying New-road, London.

RAILWAY GREASE.—RAILROAD CONTRACTORS, MINING AGENTS, AND OTHERS, who require a FINE CHEAP GREASE for HEAVY BEARINGS, are requested to TRY JOSEPH TURNBULL'S ANTI-FRICTION GREASE, which is proved by certificates to surpass all others for its lubricating qualities, and for cheapness.—Samples, and full particulars, may be obtained by applying to F. Taylor, No. 45, Munster-square, Regent's-park, SOLE AGENT FOR LONDON; or to Mr. H. Singleton, Bolton, and Co., Marble-street, Manchester.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is after trials on machinery and axles of every kind where constant friction is kept up,—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

TO ENGINEERS, ARCHITECTS, AND CONTRACTORS.—GREAVES' GROUND BLUE LIME AND LIME CEMENT, AT 2, SOUTH WHARF, LONDON; AND WORKS, SOUTHAMPTON, HAMPSHIRE. Agent for Liverpool.....Mr. Wylle, 56, Gloucester-street. Ditto for Manchester.....Mr. J. Thompson, Back King-street. Ditto for Chester.....Mr. J. Harrison, Lincolns Hall-street.

NOTICE TO THE PROPRIETORS AND SHARE-HOLDERS OF MINES, SMELTING-WORKS, &c.—Messrs. MITCHELL and FIELD beg to inform the PUBLIC, that they have REMOVED from No. 5 & 6, to No. 23, HAWLEY ROAD, KENTISH TOWN, where they have erected a spacious LABORATORY, fitted expressly for the performance of all OPERATIONS CONNECTED WITH MINING.—Practical instruction to gentlemen in Assaying, Mineral Analysis, and Manufacturing Chemistry in general.

All communications to be addressed to Messrs. Mitchell and Field, assayers, No. 23, Hawley-road, Kentish Town.

Preparing for the press, and will be ready for delivery on the 1st of February, 1846, price 2s. 6d., bound in cloth.

MINE MATERIALS.—L. T. TREGELLAS, QUAY, TRURO presents his respects to MINERS, and begs to OFFER them the following GOODS, of good quality, and at the lowest market prices:—

IRONS, including best SHROPSHIRE BARS, extra-refined CHAIN IRON, BOILER-PLATES, KILN-STARTS, HOOPS, and SHEETS. STEEL of every description. COALS. GUNPOWDER and POWDER CANS. HEMP and WIRE CORDAGE. Best SCAP CHAIN, warranted. KILNBRICKS and WATER BARRELS. Nails of all kinds. SHEET LEAD, and Pick Lead, and Red Lead. SUGARS. PICKETS and Pick Moulds. Mallets and Mallet Iron. Saws and Hatchets. Shovel Bits from 1s. per doz. to 5s. per doz. Pick Hilt.

SOUTHERN AND WESTERN MINING COMPANY OF IRELAND.

INCLUDING EAST AND WEST CARBERRY AND THE COUNTIES OF CORK AND KERRY. Registered Provisionally, and to be incorporated under Letters Patent from the Queen. No shareholder liable beyond the amount of his shares.

Capital, £225,000, in 15,000 shares, of £15 each.—Deposit £2 per share.

PROVINCIAL COMMITTEE.

Messrs. N. L. BEAMISH, K.H.F.J.S., Ballincurragh, county of Cork, chairman. Sir George Colthurst, Bart., Ardnam. Horatio Townsend, Esq., D.L., Woodside, county of Cork. Daniel Leahy, Esq., D.L., Shanakill House, county of Cork. James Morrell, Esq., H.B. Sheriff, city of Cork. Thomas Somerville Rogers, Esq., J.P., Tramore, county of Cork. Robert Carr, Esq., merchant, Sidney-place, city of Cork. St. John Jefferys, Esq., J.P., Grenville House, city of Cork. Peter Fitzgerald, Esq., Inchbeg, county of Cork. William K. Rogers, Esq., Grand Parade, city of Cork. James P. Bell, Esq., Fermoy, county of Cork. Robert Briscoe, Junr., Esq., Fermoy, county of Cork. John Fleming, Esq., J.P., New-court, county of Cork. Charles B. Ware, Esq., P.N., County Club, city of Cork. John Gould, Esq., merchant, Sidney-place, city of Cork. John Leahy, Esq., Shanakill House, county of Cork. John Carmichael, Esq., Riverstown House, county of Cork. James Carnegie, Esq., Northeast, county of Cork.

CONSULTING COUNSEL.—The Right Hon. D. R. Pigot, Q.C., M.P., Merrion-square, Dublin. **STANDING COUNSEL.**—The Recorder of Cork, and J. H. Reeves, Esq., Barrister-at-Law. **SOLICITORS.**—Thomas Jameson, Esq., 4, South-wall, Cork. **LONDON SOLICITORS.**—James Coppock, Esq., 3, Cleveland-row, St. James's. **SECRETARY.**—William Connell, Esq., 80, South-wall, Cork. **TREASURER.**—The Provincial Bank of Ireland, Cork.

In laying before the public a prospectus of the Southern and Western Mining Company of Ireland, the provisional committee feel that no lengthened statement is required to create a full appreciation of the advantages which must be derived from the development of the mineral wealth of the southern and western districts of Ireland, which the most eminent authorities acknowledge to equal, if not exceed, in metalliferous deposits and mineral richness the most favoured mining districts in England.

Independent of the acknowledged abundance of ores, no country in the world presents to the miner greater facilities and advantages for working mines than those which present themselves in the southern and western portions of Ireland. It is a well-known fact, that the mines in England, with few exceptions, are from their position incapable of being worked, and are seldom commenced, without the aid of both steam and horse power, either of which occasions at once a large outlay of capital, and entails a heavy annual expense, which cannot be avoided, and yet, notwithstanding these heavy drawbacks, many of the Cornish mines, and those in other parts of England, are paying to the adventurers from £50 to £2000 per cent. on the capital invested. The prices of shares in the Mining Journal fully testify to this fact.

The proximity of the sea of the principal mines in the southern and western districts of Ireland, admitted of the ores being shipped abroad in materials loaded without incurring the heavy expense of inland carriage, to which all the mines in England are subject. The elevation of the sea above the sea level varying from twenty to fifty fathoms (and rising on the inland divide of the lodes in many instances to 100 fathoms), affords opportunities of working effectively by means of deep levels, and renders quite unnecessary the expensive auxiliaries of either steam or horse power, while the "adits or levels" allow the water to flow off from the mine, and at the same time the ore and waste to be trammed out to the dressing floor. To any party acquainted with mining operations, these advantages will appear evident, and will readily be admitted to be equal to a saving of from 20 to 40 per cent. in the working of mines, when compared with those which have not the advantage of similar position.

Under such favourable circumstances, while the mines of the southern and western portion of Ireland are admitted by the most eminent authorities to equal, if not exceed, the most favoured mineral districts in England, and aided, as ours are, by every natural facility for their development, together with a ready and abundant supply of surface water and cheap labour, it is not reasonable to expect that we shall have at least an equal return for the outlay of capital as is yielded by the most prosperous mines in England? To the landed proprietors in the districts where operations are proposed to be carried on, the underdrainage of the surface, which can be so highly appreciated. The circulation of "the extensive employment, the increased demand for agricultural produce, and the opening up of wild and hitherto unprofitable districts, must necessarily disseminate an extent of prosperity in which the proprietors of the soil will have a full and immediate participation.

It may, perhaps, be objected that mining in Ireland has hitherto been a failure. Several mines have commenced without other experience to guide them, or capital to allow up the undertaking, and hence the failures that may be named; but where capital has been applied, under skilful management, experienced agents and careful managers, the mines have succeeded, and have resulted in the most profitable returns. The Cornish Mines, situated on Skidn Harbour, in the west of the county of Cork, were first opened about six years since, and have during that period sold at Swansea over £17,000 worth of copper ore, while the capital subscribed did not exceed £2500. The last small cargo from this mine, sold on the 23rd October, 1845, produced a sum of £1099, or an average of over £19 per ton.

Professor Kane's invaluable work, *The Industrial Resources of Ireland*, fully corroborates the statements set forth in this prospectus, as to the value of the southern and western districts of this country as a mineral point of view.

The promoters of the proposed undertaking are determined by a careful supervision of the expenditure to have that economical management so essential to the success and prosperity of the company, and which has already marked in so prominent a manner those mining operations in the west of this country, with which they have been individually connected. Since the preliminary announcement of the West Carberry and County of Cork Mining Company, now registered as the "Southern and Western Mining Company of Ireland," appears before the public, the promoters have concluded an advantageous arrangement for the purchase of the Gurravilla Copper Mines, situated on the south-eastern shore of Barry Bay, together with the whole royalty of the estate in which that most promising mine has been discovered, and where operations have been actually commenced.

As applications have been already received for the full amount of shares, and the Irish share list has been closed, the provisional committee have decided upon leaving the list open to English applicants, up to the 15th January next.

Applications for shares, in the amount of £15, will be received by Messrs. Jameson, Esq., solicitor, No. 4, South Wall, Cork; Charles Godwin, Esq., 2, Royal Exchange-buildings, and Messrs. Benjamin and Mark Boyd, 4, New Bank-buildings, London; Morris Reynolds, Esq., Barnard's-buildings, Gresham-street, and Messrs. Joseph King and Son, Exchange-buildings, Liverpool; Thomas H. Churton, Esq., 12, Exchange-street, Manchester; John Frederick Fenner, Esq., 36, New-street, Birmingham; and by the secretary, William Connell, Esq., No. 80, South Wall, Cork.

FORM OF APPLICATION FOR SHARES.
To the Provisional Committee of the Southern and Western Mining Company of Ireland. Gentlemen.—I request you will allot to me shares, of £15 each, in the above undertaking; and I agree to accept the same, and pay the deposit of £2 per share thereon, or upon such number as you may appropriate to me, and to sign the necessary deeds when required thereto. Dated this day of 1846.

Name in full.....
Profession or trade.....
Place of residence.....
Place of business.....
Name of referee.....

RYE AND THOMAS, MINE AGENTS AND DEALERS IN STOCKS, RAILWAY AND OTHER SHARES, 80, OLD BROAD-STREET, LONDON, AND AT LISKEARD, CORNWALL.

JAMES LANE, SHARE AGENT HALL OF COMMERCE, LONDON.

WILLIAM TRENEY, DEALER IN RAILWAY AND MINING SHARES.—ESTABLISHED TEN YEARS. OFFICES, No. 80, THREADNEEDLE-STREET, LONDON.

THOMAS THORBURN and Co., METAL BROKERS No. 48, BUCHANAN-STREET, GLASGOW, have always on SALE PIG-IRON, RAILWAY BARS, CHAINS, and BAR-IRON of every description.

MESSRS. LAMOND, SMALE, and LAMOND'S PUBLIC SALE OF RAILWAY SHARES, &c. are HELD, at the Hall of Commerce, Threadneedle-street, every TUESDAY and FRIDAY, at One o'clock precisely.—Orders received until Four o'clock of the day prior to sale.—London, Dec. 31, 1845.

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of the proprietors of this association will be HELD, in conformity with the Statute of Settlement, at the office of the company, 26, Austinfriths, on Monday, the 12th day of January next, at One o'clock precisely. On that day two directors—viz. Robert Fraser, Esq., and George Probyn, Esq., and one auditor, Alexander Dryce, Esq., will go out of office by rotation, but are immediately re-eligible, and are candidates for re-election. It is necessary that parties intending to offer themselves as candidates for the direction and audit should have notice of such their intention with the secretary, at the office of the company, 26, Austinfriths, at least fourteen clear days before the day of election. By order of the court of directors. WM. LECKIE, Secretary. 26, Austinfriths, Dec. 23, 1845.

CORNUBIAN MINING COMPANY.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders of this company will be HELD at the office of the company, 44, Finsbury-square, London, on Monday, the 24th day of February next, at Two o'clock in the afternoon precisely, for the purpose of taking into consideration a resolution, to be then proposed, for dissolving this company, and for authorising the directors to dispose of the company's mines, materials, and other property, or otherwise, for such meeting to determine as to the means to be adopted for raising the further money requisite for carrying on future mining operations.

And notice is hereby also further given, that if, at such meeting, a resolution shall be passed for dissolving this company, then another Special General Meeting of the shareholders of this company will be held at the same place, on Monday, the 16th day of February next, at Two o'clock in the afternoon precisely, for the purpose of confirming or rescinding such last-mentioned resolution. 44, Finsbury-square, London, Dec. 30, 1845.

LAMERHOOE WHEAL MARIA COPPER MINE.—ROSCARROCK SILVER-LEAD MINE. WHEAL MARY SILVER AND COPPER MINE. WHEAL WALTER COPPER AND LEAD MINE. The business of the above mines will in future be CONDUCTED at 4, KING-STREET, CHEAPSIDE, where all information respecting them may be obtained. Dated January 1, 1846. JAMES CROFTS, Secretary.

CLARENCE RAILWAY.—The HALF-YEARLY DIVIDEND, due on the 5 per Cent. Preferential Shares on the 31st December, 1845, are now in course of PAYMENT at the company's office, No. 80, Old Broad-st., London. Dec. 30, 1845. CHARLES BENSON, Secretary.

OXFORD AND SALISBURY DIRECT RAILWAY.—The committee of management have the satisfaction to announce, that the requisite notices have been served on the landowners and occupiers, and that the plans, sections, and books of reference have been regularly deposited in the Parliament office and Private Bill office, and with the clerks of the several parishes throughout the route. The whole of the Standing Orders of both Houses of Parliament have thus been fully complied with, and the committee are proceeding with all the necessary preparations to enable them to present their Bill in the ensuing session. By order of the board. Z. HUBBERTS, Secy. Moorgate Chambers, Moorgate-street, Jan. 1, 1846.

OXFORD AND SALISBURY DIRECT RAILWAY.—The whole of the Standing Orders of Parliament having been duly fulfilled up to the present time, the committee of management consider it expedient to inform their shareholders and allottees, as well as the public at large, that in order to ensure, as far as possible, the patronage to which the projected line of railway is justly entitled, they have resolved upon a further extension of the time for payment of deposits, on shares in this company, until the 31st of January inst. The subscribers' agreement and Parliamentary contract be for signature at the office of the company. By order of the board. Z. HUBBERTS, Secretary. Moorgate Chambers, Moorgate-street, Jan. 1, 1846.

LONDON AND BIRMINGHAM RAILWAY.—NOTICE.—The following reductions in the Fares of Passengers, and the Rates for Parcels, between London, Birmingham, and Liverpool, will take place on the 1st of January, 1846:—
LONDON TO LIVERPOOL.
FARES OF PASSENGERS.
By express and select trains.....from 47s. to 40s.
By other trains, first class.....40s. to 37s.
Ditto, second class.....37s. to 34s.
Ditto, third class.....34s. to 31s.
FROM LONDON TO BIRMINGHAM, THE REDUCTIONS WILL BE—
FARES OF PASSENGERS.
By express and select trains, first class.....from 27s. to 25s.
By other trains, first class.....25s. to 23s.
Ditto, second class.....23s. to 21s.
Ditto, third class.....21s. to 17s.
The fares for intermediate distances will be reduced in proportion.

The rates for small parcels, not exceeding 12 lbs. weight, will be reduced between London and Liverpool from 2s. 6d. to 2s.; and between London and Birmingham, from 1s. 6d. to 1s.; and 1s. 3d. down to 1s. each way. By order. R. CREED, Secretary. Office, Euston Station, Dec. 24, 1845.

LEEDS AND CARLISLE RAILWAY COMPANY.—Notice is hereby given, that a MEETING of the shareholders of this company will take place at the London Tavern, Bishopsgate-street, on Monday, the 5th January, 1846, at One o'clock precisely, to lay before the proprietors the terms of the amalgamation which has been agreed to with the Yorkshire and Glasgow Union Railway Company, and the general state of this company. By order of the committee of management, Graham Rogers, Basinghall-street. C. LAMCOCK WEBB, Secretary.

LEEDS AND CARLISLE AND YORKSHIRE AND GLASGOW UNION AMALGAMATED RAILWAY COMPANY.—The shareholders in the Leeds and Carlisle Railway Company are hereby informed, that the NEW DEEDS will LIE for SIGNATURE at the following PLACES and HOURS hereafter mentioned:—viz.:
HULL.—At the Victoria Hotel, on Wednesday, January 7, between the hours of Eleven and Four.
LEEDS.—At the offices of Messrs. Atkinson, Dibb, and Bolland, on Thursday and Friday, January 8 and 9, between the hours of Eleven and Four.
OTLEY.—At the offices of Edward Barrett, Esq., on Monday, January 12, between the hours of Eleven and Four.
DARLINGTON.—At the offices of George Allison, Esq., on Wednesday, January 14, between the hours of Eleven and Four.
NEWCASTLE-UPON-TYNE.—At the Queen's Head Hotel, on Wednesday, January 7, between the hours of Eleven and Four.
YORK.—At the Black Swan Hotel, on Thursday, January 9, between the hours of Eleven and Four.
CARLISLE.—At the Bush Hotel, on Wednesday, January 7, between the hours of Ten and Four.
GLASGOW.—At Carrick's Royal Hotel, on Friday, January 9, between the hours of Ten and Four.
EDINBURGH.—At the Royal Hotel, on Saturday, January 10, between the hours of Ten and Four.
MANCHESTER.—At the Mosley Arms Hotel, on Tuesday, January 12, between the hours of Eleven and Four.
NOTTINGHAM.—At the White Lion Hotel, on Wednesday, January 14, between the hours of Eleven and Four.
IPSWICH.—At the White Horse Hotel, on Friday, January 16, between the hours of Eleven and Four.

BRISTOL.—At the White Lion Hotel, Broad-street, on Monday, January 10, between the hours of Eleven and Four.
EXETER.—At the New London Hotel, on Tuesday, January 20, between the hours of Eleven and Four.
Those shareholders who have not forwarded their scrip to the offices of the company are further informed, that it will be necessary for them to bring their scrip to the purpose of being stamped when they sign the deeds.

By order of the committee of management. C. LAMCOCK WEBB, Secretary.

ENLARGEMENT OF THE "ATHENÆUM."—On and from January 3, the "ATHENÆUM" will be PERMANENTLY ENLARGED to twenty-four large quarto pages.—Price FOURPENCE.

THE GAUGE QUESTION.

We gave, in the Journal of the 20th ult., a statement of the results of the experiments made on the Great Western Railway, to test the qualities of the broad gauge, when the maximum speed obtained was one mile in 61 seconds; since then the narrow gauge party have made some private experimental trips, and, on Tuesday last, the first public experiment was made on the Great North of England line, between York and Darlington—43 miles; there were present Professors Barlow and Airey, two of the commissioners; Messrs. Brunel, Saunders, and Seymour Clarke, of the broad gauge; and Messrs. Hudson, Bidder, Gooch, Cabry, Harrison, Harding, and Berkeley, of the narrow gauge. The Lord Mayor of York, and other gentlemen interested, were also present. The engine was a new one, built by Mr. R. Stephenson, with six wheels—7 ft. 4 in. high to the top of the boiler, with cylinders outside; it had only been engaged about a week, and in experimental trips only: the train was only loaded to 50 tons, and consequently 10 tons lighter than the lightest load drawn on the Great Western—Mr. Bidder however explained that he wished first to experimentalise with light trains, and that afterwards he would proceed to heavier ones. At 12 m. 17 sec. past 9 A.M. the engine started, and accomplished the 43 miles in 1 h. 13 m. and 53 sec., the maximum rate of speed being 1 mile in 68 sec., and the minimum 1 mile in 136 sec.; the return trip was performed in 1 h. 23 m. and 53 sec., including a delay of 5 m., to take in water. This experiment, so greatly inferior in its results to the Great Western, must not by any means be considered as shewing the powers of the narrow gauge; indeed, more rapid speed is continually being attained by the mail and express trains. One great cause of this want of success, was the state of the wind, which blew a perfect hurricane during the whole of the journey, and which Mr. Bidder calculated, as equal to an addition to the weight of the train of at least 100 tons; it was, indeed, evident that it had a most powerful retarding effect, from the fact, that the moment the train entered the cuttings, the speed increased perceptibly, but as soon as it regained a level, or reached an embankment exposed to its full effects, the rate was slackened. We should almost think, too, that a well tried, and powerful engine, which had been some time in regular working, could have been depended on far better, than an untried one, built only one week; of this, however, Mr. Bidder must be the best judge. It is unnecessary further to compare these speeds, as another trial is to take place, on the first calm day; and we shall be much deceived if far greater average speed is not attained, even equal to that on the Great Western. Mr. Bidder, in estimating the retardative force of the wind, noticed that the engine consumed as much fuel and water, generated as much steam, and was consequently equal in power to that on the Great Western with a train of 81 tons; and he, therefore, came to the conclusion, that this power was expended on overcoming the force of the wind. The following day, Wednesday, being an exceedingly calm day, the experiments were continued, when, with the 50 ton train, the maximum speed was one mile in 67 sec., and the minimum, one mile in 90 sec., leaving out the first and last mile; a train of 80 tons was then put in requisition, when the results were—greatest speed one mile in 74 sec., minimum one mile in 92 sec., without first and last mile; the average rate was 44 miles per hour. These results, though not quite equal in speed with the experiments on the Great Western, are more satisfactory than the first day.

On Thursday, the weather proved unfavourable, and Mr. Bidder refused to experiment with an 80 tons train, though the commissioners stated their opinion to be that he ought to endeavour to shew the capabilities of the engine in such weather. Mr. Bidder, however, refused to run more than four carriages; and it being feared that great speed was intended to be attempted, several gentlemen refused to enter the carriages; and we are sorry to say, that the fear of an accident was realised. The train left York at 49 min. past nine, and had accomplished 22 miles in 26 minutes, when, in consequence of a broken chair, and injured rail, the engine and carriages run off, and turned over on the side of a three ft cutting. The parties inside received but few injuries,—but we are sorry to say, that the stoker was so severely injured, that there are fears of his not recovering. This is a most unfortunate termination of these trials; and we must now wait with patience for further test of the correctness of the exploits on the Great Western, and for publicly acknowledged proof of the capabilities of the narrow gauge.

GREAT EUROPEAN RAILWAYS COMPANY.

Sir,—You will, perhaps, permit me to draw your attention to the report in the papers of Tuesday, of the proceedings at the Mansion House, in reference to the above company, wherein a few inaccuracies occurred, inseparable, probably, from the rapidity with which the reporters' short-hand notes are taken. The Lord Mayor is represented therein as having put two questions concerning me, which had reference to the public secretary of the company. Again, I am reported as having said, that in the list of the provisional committee were directors of the East India Company. Such, Sir, is not the fact; I stated officers in the army, the navy, and the Hon. East India Company. The grounds on which the company resisted the demand sought to be enforced by intimidation, are, perhaps, not so accurately given as they were stated—viz., by reason of an attempt at extortion. The Lord Mayor is represented to have remarked, that on looking over the paper, handed to him, containing the names of the provisional committee, that it certainly abounded with highly respectable names, and that many of the gentlemen described were his intimate friends. The document, thus handed to his lordship, can scarcely be termed "a paper," as it was a large bound book of folio form. In reply to the calumnies which were put forth, and persevered in, even after his lordship's decision had been very unequivocally expressed on the case, I more than once urged his lordship to do me the favour to select any number of names, which appeared in the book, and publicly to call for their several letters of authorisation; but his lordship instantly declined, and stated, in reply, that he considered he had no right so to act. I am, Sir, your obedient servant,
EDMUND SMITH, private secretary to the promoters of the company.

Great European Railways Company, Offices, St. Helen's-place, Jan. 31.
Sir,—I feel myself bound to reply to the letter signed William James Adams, inserted in the Times of Wednesday, in which that person states, that I have frequently denied myself to him in person, and mentions one instance at the offices of the company. I have never denied myself to Mr. W. J. Adams, otherwise than by refusing to see him when he impudently intruded himself at my private residence, from the mere fact of having seen my name registered as the promoter of the company; and this he did, not for the purpose of applying for any account, but to request me to give him particulars of the company, as you will perceive it is stated, in Bradshaw's paper, of the 18th December. As respects the instance alluded to, I am fortunately enabled to contradict Mr. Adams by the evidence of four clerks, who were present on the occasion, and whose signatures to my statement I enclose for your satisfaction.

EDMUND SMITH, private secretary to the promoters of the company.
Signed by George Shirley, Robert Jennings, Charles Masterton,
Richard Dearmer, Sec.

DEPOSITS IN PRIVATE BILL OFFICE.—We learn from an official source that 714 lodgments for the new lines have been effected in the Private Bill Office, being less by 68 than were deposited with the Board of Trade, where they amounted to 787.

LIVERPOOL AND DERBY.—The provisional committee announce to the shareholders that, in consequence of the immense number of applications for shares received in this company, the committee directed the engineers to proceed with their surveys and plans, and issued the usual Parliamentary notices; but, in consequence of the altered state of the money market, they have deemed it advisable to stay proceedings for the present session, and to allot the shares, and to call upon the applicants to pay a deposit of 1s. per share to cover the expenses incurred; and upon payment of that sum, each applicant will be indemnified against demands which might otherwise be made upon him. The money for the whole line, the committee state, has been completed, and will be kept till next year, when they hope to re-form ("reform," the printer states) the company, and to issue the shares in the usual form.

AMALGAMATION OF THE DUDLEY, MADELEY, AND BROSELEY, WITH THE SHREWSBURY AND BIRMINGHAM.—The Dudley, Madeley, Broseley, and Iron-bridge, have agreed to amalgamate with the Shrewsbury and Birmingham, the shareholders in the former receiving two shares of 25s. each in the latter company for every three of their present shares, the Shrewsbury and Birmingham undertaking to provide railway accommodation for the district which the Dudley and Madeley was intended to serve. This arrangement, considered advantageous to both companies, was effected at a meeting of their respective committees, held at the Stork Hotel, Birmingham, on Wednesday evening.

THE TRUCK SYSTEM.—We have received several communications relative to the extensive operation of the illegal truck system on the whole line of the Chester and Holyhead Railway, now in the course of formation. We are told that there is scarcely a sub-contractor who pays the men's wages in coin; and that the latter are compelled to take inferior necessities of life from their employers, and at an enormous price. This is not only robbing the men, but injuring the fair trader. It is got to be glaring a head in some parts of Flintshire and Denbighshire, that the gentry are preparing to put it down with the strong arm of the law, for which they deserve the thanks of the community.
—Chester Chronicle.

GLAMORGAN CENTRAL MINERAL, AND DUFFRYN LLYNVI AND PORTH CAWL RAILWAYS.

On Tuesday last, a special meeting of the proprietors in the Duffryn Llynvi and Porth Cawl Company, was held at the Wyndham Arms, Bridgend, for the purpose of considering a proposition made, or to be made, by the committee of management of the Glamorgan Central Mineral Railway Company, and for finally agreeing to terms for such conversion; and also to authorise certain parties to subscribe for shares in the Glamorgan Central Mineral Railway Company.—Sir DREW MACKWORTH, Bart., in the chair.—He observed, that one of the propositions he had to submit was, to authorise certain parties to subscribe for shares in the Glamorgan Central Mineral Railway Company, on behalf of the Duffryn Llynvi and Porth Cawl Railway Company, and that the object in view was simply this, that in case the amount of deposits required by the Standing Orders of Parliament should not be paid in time, the deficiency should be paid by certain parties on behalf of the company, and who should by the company be borne harmless. These parties, whoever the meeting might select, would have to pay the deposits on 100 shares, and be borne harmless by the company. It was merely a precautionary measure which the company were recommended to take by their professional adviser, and which was rendered necessary by the backwardness of parties who applied for shares in paying the deposits.—After a few dissentient observations made by the Rev. ROBERT KNIGHT, the CHAIRMAN said, as soon as the Act passes, the money will be returned instantly. It is the only mode we have of obviating the difficulty which presents itself, by the deficiency in the amount of deposits. It will be best that Sir Robert Price, and other members of the committee, should be authorised to subscribe, and be borne harmless by the company. The proposition was eventually carried unanimously.—The CHAIRMAN then entered into a very detailed history of the Duffryn Llynvi and Porth Cawl Railway Company—the amount of capital raised, how raised, and the causes which induced them to form the new company. He afterwards read a proposition, which he had prepared after due consideration, and which had reference to the mode in which the sum of 14,000£ should be paid—viz.: "That the old company do hand over to the new company the sum of 14,000£, out of their existing assets on the following terms:—That all sums advanced by the old company to the new company, on account of preliminary surveys, and all matters connected with the application to Parliament for the new Act; likewise, all sums expended by the old company in new works at Port Talbot, or in enlarging and repairing the road, since Oct. 31, 1845, shall be considered as part of the 14,000£. That the new rails shall be sold by the old company, and that the sum realised by the sale shall be handed over to the new company, and be considered as being part payment of the 14,000£. That new works at the port, not exceeding 2000£ in the whole, and likewise in the great curves, especially at Ffordun (not exceeding 2000£), shall be expended by the direction, and under the superintendence of the new company's engineer, and the amount so expended shall also be taken as part payment of the 14,000£." He had obtained the opinion of Mr. Scott Russell, the company's engineer, to the effect that the new company, as well as the old, would be benefited by expending upon the road and the port the sums above named. He then read the following statement, showing how the 14,000£ was to be made up—viz.: Cash due on quarter shares, 6759£; advanced to new company, towards procuring new Act of Parliament, surveys, &c., 3800£; difference in price of iron (before explained as amounting to 3£ per ton), 1275£; paid for new rails, 1830£; capital expended since Oct. 31, 1845, 1422£—total, 15,086£.—The proposition was unanimously carried, and a vote of thanks passed to the chairman and the committee.

NEWCASTLE-UPON-TYNE, EDINBURGH, AND DIRECT GLASGOW JUNCTION RAILWAY.

REPORT OF THE ENGINEER-IN-CHIEF.

To the Provisional Committee of the Newcastle-upon-Tyne, Edinburgh, and Direct Glasgow Junction Railway.

At your request, and as communicated by your Chairman, Mr. Monck, I proceeded to examine the line of the proposed Newcastle-upon-Tyne, Edinburgh, and Direct Glasgow Junction Railway, and accordingly, on the 9th instant, I met your Deputy Chairman, Mr. Grey, and one of your local engineers, Mr. John Green, at Hawick, and with them went over the country between Hawick and Newcastle. Since that date, I have been furnished by your local engineers with a copy of the plans and sections of your scheme, as deposited in terms of the Standing Orders of Parliament; and in regard to the line, I have to submit this report. The line, as you are aware, commences at Newcastle, at the station of the Newcastle and North Shields Railway, and, by forming a Junction with that Railway, it will be brought in connection with the Railways from London to Newcastle. From this point, which has been well chosen by your local engineers, the line proceeds for a furlong in length, level; thence it ascends to the higher ground above Newcastle by a gradient of 1 in 90 for 1½ miles. Thence the line proceeds by Bulman Village, Fawcett Colliery, and Prestwick Village, to East Coldcotes, being about 10 miles out, and with easy gradients and very moderate works.

From East Coldcotes the line proceeds by Belsay Red House, Bradford Village, Clockmill, and West Harle, to the summit of the country between Newcastle and Reedwater Valley, about 24 miles. The gradients along this part of the line are steeper, being generally from 1 in 100 to 1 in 132. These gradients are, however, broken up with portions either level or possessed of very easy gradients. The works along this portion of the line are not very heavy. From the summit the line descends by the Valley of the Liddelburn to the Reedwater Valley, near to Woodburn, a distance of 4½ miles, by a gradient of 1 in 75, and with works of a heavier character as compared with the other works on the line, but not more so than usual on many lines. The line having entered the Valley of the Reed, it proceeds along that Valley by Corsemide, Blackhope, Chattlehope, and Whitelee, to the March between England and Scotland at Carter Fell. The gradients and works along this portion, until near the North end, are moderate. At the North end, the summit of the whole line is ascended by a gradient of 1 in 76 for 2 miles 7 furlongs, and the Carter Fell is proposed to be passed by a tunnel about 2,250 yards long. There are only, however, 1310 yds. of that tunnel embraced in the plans deposited, and that portion of the line is level. The point for crossing the Carter has been well chosen by your local engineers, as it appears from the levels which have been taken that that apparently formidable ridge may be crossed by a tunnel of not unusual length, and of no great difficulty. This tunnel will reduce the height to be passed over 428 feet. Your scheme, as at present laid out, terminates at the Carter, and is in length from Newcastle 46 miles 1½ furlongs, and is so laid out as to render its extension to either Hawick or Jedburgh not a very difficult matter. Your local engineers are, as you are aware, now engaged with the survey of that extension; and I am in hopes that, in a very short time, we will be in a position to judge of the best line for the extension. It appears that it will either join the Hawick Branch of the North British Railway, near to Hawick, or the Jedburgh Branch of that railway, which will be before Parliament next session; but by either way, I have no doubt that a line quite fitted for passenger traffic will be obtained, and your line will thereby be in a position to form a part of a through-line from Newcastle to Edinburgh on the one hand, and to Glasgow on the other.

Such is the description of the main line of railway. Then as to the Branches. Three Branches are proposed:—one from the main line, in the Valley of the Liddelburn, by Ridsdale Iron Works, to the Hexham Branch; one from the main line, near to Woodburn, to the Newburn and Carlisle Railway; and one from the main line, near to the last-mentioned, or Hexham Branch, to Bellingham. The first of these branches—viz., the one by the Ridsdale Iron Works, is for the accommodation of these Iron Works, and the mineral field passed through. It is about four and a half miles long, and, although possessed of steep gradients, will not be of very heavy construction. The second and important branch commences, as I have stated, near to Woodburn, and proceeds down the Valley of the Reed to the North Tyne, and thence proceeds along the valley of that river until it joins the Newcastle and Carlisle Railway, about half a mile to the west of the Hexham Station. The gradients of this branch are generally good. There is, however, one at the departure from the main line of 1 in 92, and 1½ mile long; and another further down the Valley of 1 in 85, and a mile long. This latter gradient can, I think, be improved in the execution of the works. The works on this branch are of a heavier character than those on the main line, but not beyond the importance of the branch, as it is likely from its position to become a portion of a more direct line to the north. The length of this branch is 17 miles 5 furlongs. The third branch commences on the Hexham branch at Reedsmouth, and terminates at Bellingham. It is in length about 1½ miles.

I have now generally described your whole scheme, embracing in all about 70 miles of railway; and the main portion of it, viz., the main line and Hexham Branch, about 64½ miles. It appears to me, that generally the line has been well laid out—capable, I have no doubt, as all lines are, of improvements in detail, and which are attended to in the execution of the work. The works over the whole scheme are not of an extraordinary character, and they will in my opinion be executed for a sum considerably within that stated in your prospectus. Your local engineers are busy with the calculations necessary for the detailed estimates, and so soon as these are completed you will be able to ascertain the exact amount. Some of the gradients, as you will observe, are rather of a stiff character, but they are not now unusual, as you will see from the sections of the Lancaster and Carlisle Railway, the Caledonian Railway, and the Edinburgh and Hawick Railway, all of which have been sanctioned by Parliament, and are being executed. On each of these lines there are gradients of 1 in 75, and in longer lengths than the gradients of that measure laid down on the sections of your scheme.

J. MILLER.
3, Parliament-street, London, Dec. 19.

AN IRON STEAM FRIGATE.—A splendid iron steamer, built by Mr. J. Laird, of North Birkenhead, for the royal navy, was launched on Tuesday. This is the first large vessel of war ever built on the shores of the Mersey, and, therefore, some particulars respecting her may be interesting. Her dimensions are—Length between perpendiculars, 210 feet; breadth within paddle-wheels, 37½ feet; ditto outside, 60½ feet; depth of hold, 23 feet—tonnage (carpenter's measurement) 1,400 tons—propelled by paddle-wheels and her engines of 560 horse-power. The engine-room, magazine, and shell-room are protected by iron encasements. The upper deck flush, and of great area; there are two other decks below, the height between which is ample. This fine vessel was, by command of the Admiralty, christened *The Birkenhead*. Her armament will be two 96 pounder first guns, one forward and the other aft, and four 35 pounder broadside guns; so that with the aid of her steam she will prove a formidable opponent to any adversary. The ceremony of christening was performed by the Marchioness of Westminster—there were present the Marquis of Westminster, Earl Wilton, Sir Philip and Lady Egerton, Sir Edward and Lady Cust, Mr. Blackburn, M. P., Captain Black, R.N., and many of the principal gentry in South Cheshire. After the launch, which was beautifully effected, the visitors sat down to a splendid dinner, at which the usual loyal and other toasts were drunk.

THE MOST IMMEDIATE REMEDY FOR COUGHS AND COLDS, IS HOLLOWAY'S PILLS.—This celebrated and extraordinary medicine, is not only an effectual cure for coughs, colds, hoarseness, or even loss of voice; but it is likewise a certain remedy in all cases of wheezing, shortness of breath, and asthma. Any persons who may be so bad as not to be able to lay down in their beds lest they be choked with phlegm, may be radically cured by these pills, when every other means have failed. This latter class of sufferers may depend upon getting great relief in three days, and in ten days they will sleep almost as well as ever they did in their lives.—Sold by all medicine vendors, and at Professor Holloway's establishment, 244, Strand, London.

Glossary of Foreign Mining Terms.

In compliance with the request of several correspondents, we lately commenced the publication of a complete series of technicalities used in English and Foreign Mining—in fulfilment of our promise, those of Cornwall and Derbyshire are completed; and we now commence the terms used in

SPANISH MINING.

Abra—A fissure, a considerable opening or cavity in the mountain, rock, or lode.
Abronzado—Yellow copper ore, sulphuret of copper.
Acarreadores—Wood carriers.
Acero—Steel.
Achicar—To decrease, to diminish; applied to the diminution of water in any of the workings, lowering the water in the shafts, &c.
Achicadores—Workmen employed in removing the water in *betas*.
Acuna—Die for coining.
Acunacion—Coining.
Acunador—One who coins.
Acunar—To coin.
Ademador—A mining carpenter; a timber man.
Ademar—To timber.
Ademe—Timber work for supporting and securing the works of the mine.
Adobes—Unburnt bricks made of straw, earth, and dung, dried in the sun.
Administrador—Superintendent.
Administracion—Administration, management.
Afinacion—Refining.
Agata—Agate.
Aguafuerte—Aqua fortis, nitrous or nitric acid.
Ahondar—To sink, to deepen.
Ahonde—Sinking or driving downwards.
Alabastro—Alabaster.
Albanil—Mason, bricklayer.
Albaradon—A dyke.
Albayalde—White lead.
Albergue—A natural hollow, a den.
Alcohol—Galena, sulphuret of lead.
Alcibris o Tavera—The tyere of a smelting furnace.
Alcar—To alloy metals.
Aleacion—The art of alloying metals.
Alondiga—Corn market or public granery.
Alimentos—In mining, an allowance to mine owners, as subsistence, until their mines become profitable.
Almacen—A store-house, store-room, warehouse.
Almadaneta—A stamp head.
Almagra—Ruddle, red ochre.
Almad—12th part of a fanega.
Alquifol—Galena.
Alquilar—To hire.
Alto—The upper part.
Alumbre—Alum.
Ambar—Amber.
Amatista—Amethyst.
Amianto—Amianthus.
Amoldar—To mould.
Amonedar—To coin.
Amparo—The maintenance of the legal right of ownership by continued possession. In mining, this can only be preserved by keeping a certain number of men at work at certain periods as determined by the mining code.
Anchura—Width, roominess.
Angulo—An angle, a corner.
Antimonio—Antimony.
Aparejo—A tackle, a block and fall, an apparatus, a set of harness or beasts of burden or draft; a pack saddle.
Apartado—Establishment for parting silver and gold.
Aperos—Utensils; also materials, such as gunpowder and paper for blasting, &c.
A pique; trabajar a pique—Digging downwards in a vertical direction.
Apollvillados—Rich ores.
Apuradores—Men who rewash the earth from the tinns.
Arcilla—Clay.
Arena—Sand.
Arenilla—Fine sand.
Arastrar—Applied to where veins unite and form one; to drag.
Arastres—Mill for grinding ores, employed in the process of amalgamation of silver ores and of gold.
Arreador—Horse driver for malacates.
Arroba—25lbs. Spanish weight.
Arriero—A muleteer.
Arsenico—Arsenic.
Asbesto—Asbestos.
Aserrador—A sawyer.
Aserrar—To saw.
Asfalto—Asphaltum.
Astillero—Open forest, pasture for mules, &c.
Atacadera—A rammer.
Atacador—Rod for ramming in the charges for blasting.
Atajador—A boy who attends the horses and mules.
Atajo abierto—Applied to a mine when worked in the manner of a quarry, or by an open cut in a rock or mountain.
Atargua—Water-course of masonry.
Atierres—Attle, rubbish in the mine; earth preventing the continuation of the work.
Atisador—A stoker, man who attends the furnace.
Audiencia—Principal tribunal of justice.
Aviador—The mine owner supplied with funds for working his mines.
Aviador—He who supplies funds for working mines.
Avio—Funds advanced for working mines.
Avios—Implements.
Ayudante—Assistant.
Atacas—Labourers who collect the water in buckets from the planes of the mines, in order to pass it off by the shafts; also, men who fill the skins in the shafts, with water, mud, &c.
Azabache—Jet.
Azanca—A lead.
Azarcen—Read lead.
Azogue—Quicksilver; silver ore adapted for amalgamation.
Azogue apollvillado—Very good ore for ditto.
Azogue common—Common ore for ditto.
Azogue ordinario—Ordinary ore for ditto.
Azogue razonable—Middling ore for ditto.
Azogue en caldo—Quicksilver.
Azogueria—The ware-room, in which quicksilver is kept in store.
Azoguerio—An amalgamator; a person who superintends the process of amalgamation.
Azufre—Sulphur.
Azufre vivo—Native Sulphur.
Bancos—Rocks, which intercept the vein, or cause it to take a different direction.
Banquillos—Stools on which the marquetas are placed.
Bano—The last portion of quicksilver applied to a torta.
Barquina—A large furnace.
Barquines—Forge bellows.
Barra—A bar, an iron crow; equal shares into which the interest in a mine is divided, usually 24 in number.
Barra de plata—A bar of silver, usually about 135 marcs, or 1,080 ounces.
Barraanca—A ravine.
Barrena—A drill or borer used in blasting.
Barrenadores—Miners who work with the borer and mallet.
Barrenar—To bore.
Barrenero—A boy who attends with the boring tools.
Barrenos—Holes made for blasting.
Barreta—A miner's bar or crow.
Barreteros—Miners who work with crow bars, wedge or pick.
Barro—Clay, loam, &c.
Basalto—Basalt.
Bataa—Apuadara—A bowl used in rewashing.
Bazo—Beneath, low, lower part.
Beneficario—To extract the metal from the ore; to dress ore.
Beneficio—Making the metallic contents of the ore available by reduction.
Beneficio de caso—Reduction of ore by amalgamation, conducted in a copper pan over a fire; hot amalgamation.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—*Curry Tugthon, Dec. 27.*—The lode in the 18 fm. level, east of flat-rod shaft, is at present 16 in. wide, producing two tons per fathom; in the western end it has improved since my last, now 18 in. wide, producing three tons per fathom. No change in eastern end (12 fm. level), east of engine-shaft; in the stope behind this end the men are despoiling the lode; bottom stopes rather poor; no change in the back stopes; the end driving east on the middle lode looks much the same as when last reported, two and a half feet wide, producing about one ton per fathom. The lode up the hill in Nanigles shaft is improved, producing at present full two tons per fathom; the men sinking further east have a large lode, but at present poor; they have some lead mixed through the lode; the present depth of shaft (three fathoms) is not deep enough for the lead in Nanigles shaft. Tribute pitches looking much the same through the mine.

BEDFORD UNITED.—*Dec. 30.*—At Wheal Marquis, the cross-cut south of the 80 fm. level is progressing satisfactorily. In the 70 fm. level east the lode is 2 ft. wide, and worth 11L per fathom; and in this level west the lode is 18 in. wide, at present poor. The lode in the 58 fm. level east is 2 ft. wide, and worth 10L per fm.; and in the rise, in this level, the lode is 18 in. wide, composed of spar and mundic, with stones of ore. In the 47 fm. level west, on the south lode, the lode is 15 in. wide, and worth about 7L per fathom. At Ding Dong, the lode in the 24 fm. level, east and west of Thomas's engine-shaft, is from 3 ft. to 4 ft. wide, producing good stones of tin and copper ore. At Wh. Tavistock, there has been no lode taken down in the 55 fm. level east since last report; in this level west the lode is 2 ft. wide, composed of spar, mundic, and ore—saving work, a very kindly lode.—J. PHILLIPS.

CALINGTON.—*Dec. 29.*—At the north mine, in the 90 fm. level, driving south, the lode is small, producing good work for silver-lead ores—the back will work at 5s. in the 1L on the value of the lead; in the north end the ground we are opening will work on tribute, at 8s. in the 1L. In the 80 fm. level we are driving through ground that will set at 9s. in the 1L. In the 70 fm. level we have not got the lode. At the south mine we are cross-cutting from Johnson's engine-shaft, at the 112 fm. level, and, at the same time, are cutting a whim plot. In the 100 fm. level north the lode continues much disordered in the south end and the ground is hard, the back will set at 10s. in the 1L. The 90 fm. level has a very promising appearance, the back will set at 10s. in the 1L. In the 80 fm. level the lode is producing silver-lead ores. Our tribute pitches are looking exceedingly well. We sampled on the 24th inst., 89 tons of silver-lead ores.—J. T. PHILLIPS.

EAST TAMAR CONSOLS.—*Dec. 29.*—At Whitsun, we have forked the water 10 fms. under the 20 fm. level; there is no appearance of any other level yet; there is some part of the lode left in the south end of the shaft, which is looking very good. At the south shaft, we are clearing the 20 fm. level towards Furzehill, but have discovered no whole ground since last week's report. Furzehill engine-shaft is cut down and secured 7 ft.; there are branches left in this shaft, which we are taking down as we go. Charlotte's is just the same in appearance as last week.—B. ROBINS.

GUNNIS LAKE.—*Dec. 30.*—At Chilworth, we put our engine to work on Wednesday last, and it now works exceedingly well. We resumed sinking Bailey's engine-shaft yesterday. The lode in the adit level is without attention.—WILLIAM RICHARDS.

HAWKMOOR.—*Dec. 30.*—I beg to inform you that the south engine-shaft is 16 fms. 5 ft. below the surface; no lode taken down. The western engine-shaft is 14 fms. below the surface, where the lode is about 12 in. wide, and unproductive. In the 15 fm. level, east of Hitchins's engine-shaft, the lode is small and poor; and in this level west the lode is 18 in. wide, producing stones of ore in places.—P. RICHARDS.

HOLMBUSH.—*Dec. 30.*—The ground in Hitchins's shaft, sinking below the 110 fm. level, is hard. In the 120 fm. level cross-cut the ground continues favourable. In the 110 fm. level, west of Hitchins's shaft, the lode is small and poor; in the stope, in the back of this level, west of Hitchins's winze, the lode is 15 in. wide, and worth 27L per fm.; east of ditto the lode is heaved south by the slide; in the stope, west of the sump winze, the lode is 16 in. wide, and worth 30L per fathom. In the stope, east of Doidge's winze, the lode is 10 in. wide, worth 12L per fathom. In the 100 fm. level, west of Hitchins's shaft, no lode taken down since last reported; in the south end the lead lode is 3 ft. wide, at present poor; in the rise above the 100 fm. level, on the lead lode, no lode taken down, nor will there be, until we have communicated to the 90 fm. level; in the stope, in the back of the 100 fm. level, west of Faulk's winze, the lode is 14 in. wide, and worth 20L per fathom. In the 90 fm. level, driving north, the lead lode is 18 in. wide, at present worthless. The 62 fm. level, is, for the present, suspended, and the men removed to finish the bob plat at the 60 fm. level, west of Hitchins's shaft. In the rise, in the back of the 80 fm. level, against Bray's shaft, the lode is small and poor.—W. LEAN.

LANIVET CONSOLS.—*Dec. 27.*—Elizabeth shaft has been sunk between 2 fms. and 3 fms. this month, and more work would have been sunk, but we have been cutting hitches, putting in bearers, and fixing lift, &c., and hope, from the appearance of the ground, soon to get to the 80 fm. level. The 70 end west has been driven about 5 fms.; the lode in the end is good, about 3 ft. wide; the 70 east has been driven about 3 fms.; the lode in this end is hard, and rather poor at present. The winze at the 60, west of shaft, is sunk about 5 fms.; the lode is about 3 ft. wide, with 2 ft. of good quality ore; the winze east is sunk about 3 fms.; the lode here is large, with a leader of ore, about 1 ft. wide. In the 40 east there is no alteration.

SILVER VALLEY.—*Dec. 29.*—I beg to say that the shaftmen are getting on well in dividing and casing the shaft, which will be completed to the 20 fm. level by the end of this week; we shall then commence clearing the shaft of the stuff with the whim, and shall be prepared for setting men to work in the 30 fm. level. The lode in the 20 fm. level, driving west, is 3 ft. wide, composed of capel, spar, mundic, and peach, producing good stones of tin.—S. RICHARDS.

SPEAR MOOR.—The following are the particulars presented at the account, held at the Union Hotel, Penzance, on the 27th Dec.:

Labour cost for five months, to end of September ..	£503	1	10
Carriage ..	39	12	6
Materials ..	174	16	1
Balance against the adventurers' last account ..	217	7	0
Sales of tin ..	£979	8	9
Less credits, last account ..	200	0	0

Deductions on rails ..	£779	8	9
Holman for old iron ..	0	1	6
	6	10	6
	£786	0	9

Balance against the adventurers .. £148 16 8
It was likewise resolved, that the south part of the sett be worked by horizontal-roads connected with the engine.

TRELEIGH CONSOLS.—*Dec. 26.*—Christie's shaft, below the 90 fm. level, sinking in the country, is driven in the 90 fm. level east 3 fms. 5 ft. 6 in.; the 90 west of Christie's is driving on the cross-course; in the 90, east of sump winze, the lode is 2½ ft. wide, worth 20L per fathom. Garden's shaft, below the 80, is sinking in the country. In Good Fortune shaft, below the 70 fm. level, the lode is 3 ft. wide, more kindly, with stones of ore. In the 70, west of ditto, the lode is 4 ft. wide, not much ore, but rather more promising in appearance. In the 60, west of Symons's, the end is driven 2 ft. 6 in., lode 2½ ft. wide, yielding good stones of ore. In Symons's shaft, to cut down below the 50, the lode is 18 in. wide, worth about 5L per fm. In the 50 cross-cut, north of ditto, the ground at present is rather hard for breaking. In the 50, west of ditto, the lode is 20 in. wide, worth 5L per fm., more kindly. In the 34, west of ditto, the men have been employed about other work. In the 20, west of ditto, the lode is 2 ft. wide, with stones of ore. In the adit, west of ditto, very little done this month for want of air.—W. SYMONS.

UNITED HILLS.—*Dec. 30.*—In Williams's shaft the lode is 2 ft. wide, ore of fair quality, but not looking quite so well as last reported. In the 80 fm. level we are still driving to cut the south part of the lode in the eastern end of this level; in the western end the lode is 3 ft. wide, 6 in. on the north part producing good ore. In the 70 fm. level, eastern end, the lode is 18 in. wide, not producing any ore. In the 60 fm. level, east of eastern shaft, the lode is 2½ ft. wide, ore throughout, of average quality. West of Harper's winze the lode is 2½ ft. wide; 1 ft. on the south part, ore of average quality. In Harper's winze the lode is 3 ft. wide, 2 ft. good ore; in the stope, at the back of this level, the lode is 2 ft. wide, good ore; in the stope, at the bottom of this level, the lode is 4 ft. wide, ore of average quality. In the 50 fm. level, eastern end, the lode is 18 in. wide, poor; in the cross-cut the ground is a little improved during the past week. At Wheal Sparrow, no alteration in Gibson's shaft since last reported. In the 50 fm. level the lode is 2 ft. wide, producing some good stones of ore. In the 40 fm. level, eastern end, the lode is 3 ft. wide, producing ore throughout, of average quality. West of Gibson's the lode is 18 in. wide, producing no ore; in the stope, back of this level, east of Gibson's, the lode is 2 ft. wide, 18 in. ore of fair quality. East of Richards's shaft the lode is 2 ft. wide, poor. In the 30 fm. level, the lode is 1 ft. wide, producing ore of fair quality.—THOMAS TREVEEN. ROBERT WILLIAMS.

WEST WHEAL JEWEL.—*Dec. 29.*—The ground in the 115 cross-cut is much the same as when last reported. The 100 fm. level east, on Wh. Jewel lode, is worth 10L per fathom; in the 100 fm. level west, on ditto, the lode not taken down in the past week. In the 85 fm. level west, on ditto, the lode is worth 5L per fathom. In the 70 fm. level, west of ditto, we are still driving north on the cross-course to cut the lode; west side of it, ground very favourable for driving. The 60 fm. level, west, on the south branch, is 6 in. wide, unproductive; the 50 fm. level, west, on Buckingham's lode, is 9 in. wide, composed of spar, mundic, and spots of ore; the ground in the south cross-cut, at the same level, is very favourable for driving. The 30 fm. level east, on Morcom's

lode, is 2 ft. wide, unproductive. In the 12 fm. level west, on Tolcarne lode, we have intersected Hodge's cross-course here in the past week; the lode against it is worth 8L per fathom; in the 12 fm. level east, on ditto, the lode is worth 8L per fathom. In Wilkinson's engine-shaft, sinking below the 30 fm. level, the lode is 3 ft. wide, composed of spar, mundic, and spots of ore. In the deep adit west, on ditto, the lode is 2½ ft. wide, unproductive.—S. LEAN. R. JOHNS.

WHEAL MEXICO (near Callington).—*Dec. 29.*—In the 20 fm. level west, the ground is hard and disordered, price for driving 5L per fathom. The distance we had to drive at first, to reach the cross-course, was 30 fms., and 10 fms. now remain to be accomplished. A similar hard bar of ground was met with in Wheal Brothers, at 20 fm. level, before they reached a very large deposit of silver ores. A hard rock was also passed through in the 10 fm. level, to the west of our present workings, close to a rich course of silver. The new shaft on the copper lode is nearly completed; when the bottom of it is finished we shall proceed to extend the 6 fm. level under the Eastern Hill; the ore in the end is composed at present of jack, mundic, and spots of copper; we are preparing a floor for dressing the zinc ores, and also a few hundredweight of lead. We expect the parcels of silver ores, where raised by the tributaries, will be sold before the next meeting. In order to show the importance of reaching the above mentioned cross-course, it must be observed that the ground in the adit (which has been driven 160 fms. in the hill) is completely changed to the west of it, and there are old workings, eight or nine fms. high, in the backs; and winzes have also been sunk from which some rich ores have been raised; and although the end is rather stiff for the present, it is highly probable a gradual improvement will take place, as we approach the cross-course.—W. KNOTT.

WHEAL PENCORSE.—*Dec. 29.*—The adit level, driving south-east on Bawden's lode, is about 2 ft. wide, containing jack and spar, and spots of lead; the same level, driving east on Carne's lode, is 18 in. wide, containing jack and spar, and mundic; the same level, driving west, is about 3 ft. wide, containing jack and some spots of lead and mundic; I do consider the three ends are looking very promising for making lead at present.—J. CHAMPTION.

NORTH WHEAL ROSE.—*St. Agnes, Dec. 29.*—The loss of time which generally attends the Christmas holidays leaves me very little to say on the present occasion; the mine is much the same as when I last wrote you. My next report will go more in detail.—W. CARNE.

FOREIGN MINES.

IMPERIAL BRAZILIAN.—The following is a statement of the gold returns:

	From the Stamps.	Total raised.
1845—Oct. 10.....	15 8 6	17 0 0
„ 20.....	6 2 18	6 7 16
From 3d to 22d Oct.	13 8 1	0
Total from 1st June to 22d Oct.	186	5 13 0

ST. JOHN DEL REY.—*Morro Yello, Oct. 8.*—Produce for Sept. 11,793 oits.—113,295 lbs. troy, from 26608 tons of ore—4431 oits. per ton. This produce is attributable to the acquisition of the Cata Blanca blacks, which, by breaking a good supply of ore, has enabled us to pick it to the amount of 183 tons rejected; the produce is, in itself, a good one, but I am not satisfied with it, for the quality of the rough ores supplied by the mines remains the same as they were in 1842, 1843, and 1844 even—the produce ought to be about 13,500 oits. from the number of tons stamped. The western Cachoira ores this month show an improvement, having yielded 4387 oits. per ton, and since the ores from this mine were only picked to the extent of 3½ per cent., this yielding must be considered satisfactory. Mr. Hopkins's machine, after very patient trials, proves in our hands to be perfectly useless; it has not shown the slightest indication of being useful in arresting that gold which we know actually does escape our shaking process—viz., the very fine laminated gold which is caught better in pits without the aid of the machine.—*Mine Report:* You will see the Cachoira Mines are passing the United Mines in the supplies of ore, and yet the former are by no means in good stopping order, in consequence of the present combination of works there. The West Quebra Pannella stopes, which we had allowed to remain idle for some months, in consequence of their excessive hardness, as well as being poor, have been a good deal worked during September. The mine works, generally, are proceeding with regularity, though the timber work is not getting on so quickly as could be desired. Cost for September, rs. 23,715 = 2470L 8s. 3d. The hire of the Cata Blanca blacks is in the costs; timber, rs. 2025, is a heavy item in the cost; tiles and adobes for Timbuctoo are rs. 609; beef and slaughter, oxen, rs. 934. On the whole, the cost is not high. Heads working during 69 days, 69.—Oct. 18: The supply of ore has been ample, but from poor parts of the mines. At this time there are three stopes close together, being worked in the white spar in the West Cachoira; the Bahu sump is sinking also, and the killas intervening between the West and Middle Cachoira is being stopped, and none of all this is very brilliant ground.—Oct. 28: Heads working during 28 days, 68.7. The supply of ore has not been very abundant, though it has been picked nearly throughout the month; the sick list has been very heavy, principally from slight wounds, and the hardest stopes, as well as the poorest in the mines, have been worked on.

[FROM CORRESPONDENTS.]

HARROWBARROW CONSOLS.—They are driving the deep adit on the Wheal Brothers lode to the east of the Valley shaft; the lode in the end is about 8 in. wide, and is composed of carbonate of iron, mundic, with silver, and is of a promising appearance, but not rich; they are also driving a cross-cut north, to intersect the copper lode, which has gone off from the south part of the lode a few fathoms behind the present end. A meeting was held on the mine, on Friday, the 26th ult., when it was resolved to continue driving the cross-cut adit south, and cut the St. Vincent lode.

HARROWBARROW OLD MINE.—Considerable delay has taken place here in consequence of the founders not completing the engine in accordance with their contract, which would have enabled the company to have had her in work by the present time. Further delay will now take place, by discovering the cylinder case defective; the cylinder was in the house and fixed, when its inefficiency was discovered by Mr. West, the engineer, who very laudably rejected it. The time lost by this circumstance will be upwards of a month.

TRELAWNEY CONSOLS.—The railroad in the adit level is now completed, and they have cleared and secured about 25 fms.; the facility afforded by the railroad is considerable, in bringing out the attle, the tributaries, during the last working, having left the level and end full; the backs and bottoms has been worked away. Some progress will be made now, and the end will be shortly seen, as well as the junction of the Baralston lead lodes, which run through this sett.

GREAT WHEAL WILLIAMS.—Here they are driving on a large lode, a little to the north of Sydenham Church; but the water is quick and troublesome. The lode is 7 ft. big, composed chiefly of spar and gossan. In Cross Park they have been obliged to suspend their operations in the shaft, in consequence of so much surface-water; but have commenced bringing home an adit on the course of the lode. The lode, at present, is rather small, but in the shaft to which they are approaching, is about 1 ft. big, composed of sugary spar and flookan, and presents a very favourable appearance.

WEST HOLMBUSH.—They are driving the adit level south, to intersect the Holmbush lode, which is calculated at no great distance from the present end.

NORTH FOWEY CONSOLS.—Operations have been resumed here under the most favourable appearances. Some excellent stones of grey and yellow ore have been broken in the eastern end of the deep adit level.—A general meeting of shareholders is convened for Jan. 12th, at Mr. Strickland's, St. Austell.

EAST WHEAL ROSE MINE, near Hayle.—The adit level has been cleared to the Milenoweth shaft, being about 600 fms. in length—10 fms. have been driven since; a small branch has been cut, composed of copper and lead, which is considered very promising. The next level is being driven south, but as yet not near the lode—5 fms. have been driven, and the ground is much more favourable than when commenced. Cold Harbour adit level, which is about 300 fms. long, is also cleared—the level in this shaft had been driven about 16 fms.; since resuming, they have extended the same 6 fms.—making 22 fms. north. There is a very kindly lode in this level, on which between 2 and 3 ft. have been opened, and, as soon as the north lodes are intersected, they intend to drive on the course of this lode, for the purpose of extending the level, to afford room for the men to work and cut the other lodes, and to ascertain the most eligible spot for sinking a shaft. 18 men are employed in the three levels, and a pair of men on tribute.

MINES IN THE CALLINGTON DISTRICT.—Kit Hill, according to the height obtained in the trigonometrical survey, is 1067 ft. above the level of the sea, and about 150 ft. lower than the celebrated Caradon Hill, at the base of which are the noted South and West Caradon Mines, the parents of the numerous adventures in the Liskeard locality. Kit Hill is situated a mile and a half to the north-east of the town of Callington, and on its summit there is a patch of granite, which contains a considerable quantity of schorl and felspar; the foot of the hill, and the adjoining country, being killas, or rather thickly lamellated slate; occasionally traversed by porphyritic channels or olvans. At Gunnis Lake, there is also a granite patch; this passes into gneiss to the south-east, and is succeeded by the romantic Morwell rocks. The two silver lodes of Silver Valley, Wheal Mexico, and the Harrowbarrow Mines, to the south-east of the hill, have already been referred to, but it should further be remarked; that the silver ores taken from these mines have not been surpassed in quality or variety, even by the silver mines of North and South America. The silver-lead mines of most note (in the sketch which we shall give in an early Number) are the Callington Mines, Tamar, East Wheal Tamar, and Roerston Mines, all of which have produced large returns; the direction of these lodes is nearly north and south. In the former, the non-metallic part of the lode is composed of light blue flookan—in the others, it is principally made up of capel and fluor spar. The Callington lead lode, which must not be omitted to be observed, cuts through one or more copper veins, which are parallel to, and adjoining the Holmbush lode, and in a similarly favourable stratum. The

other lead mines of note are Wheal Concord and Wheal Grace; this is an east and west lode, and is an exception to the general rule; the bearing of lead courses in Cornwall and Devon being, for the most part, nearly north and south. Wheal Concord, a few years since, returned several hundred tons of lead; and her neighbour, Wheal Grace, from the appearance of the levels, is likely to be equally productive. The lode is large, and composed of a dark flookan, interspersed with much mundic and blackjack, or blende (perhaps better known as zinc ore). The principal copper mine in this district is the already famous Wheal Maria, situated about a mile to the north-west of the Gunnis Lake granite. The returns from this vast mineral storehouse, according to the ticketing papers, are about 10,000L per month; and, from present appearances, it is likely to equal, if not surpass, the rich East Wheal Rose—the best dividend paying mine of the day. The gossan, which is so abundant on the back of this lode, is incomparably fine, spongy, cellular, and of a dark red colour, interspersed with spots of ore, arsenical pyrites, and cam. For the present, there is some difficulty in accounting for this vast accumulation of ore; probably, however, it is the result of the meeting of two or more lodes, on which the cross-courses have exercised a material influence. The killas or country is fawn colour and light blue, and the structure of the rock is lamellar. At present, the lode in the deepest level is reported to be worth 400L per fathom; for such a deposit as this, taking into consideration the smallness of the outlay, it would be difficult (if possible) to find a parallel in the history either of British or foreign mines.—[To be continued.]

SOUTH ST. GEORGE.—Having some shares in this mine, I have thought proper within the last few days to visit it, and am authorised by the agent then on the mine to forward you the following particulars:—The engine-shaft is sunk about thirty-seven fathoms from surface (adit between seven and eight fathoms); the shaft at present is not being sunk, as they are already deep enough to drop a new lift of pumps, and have commenced driving south to cut their principal east and west lode; ground in the end about 55s. per fathom, and will stand without timbering—suppose they have about seven fathoms to drive, before cutting the lode. The 10 fm. level, going west, is very rich for blende, both in the end and back; the lode is about 18 ft. big. The 20 fm. level, going west, is also rich for blende, with occasional stones of copper ore, and frequently good stones of lead ore, with every appearance of an alteration for the better shortly, as they are just now getting into the western hill, where the ground looks more kindly for lead than hitherto. The 20 fm. level, going east, is rich for blende, with some copper and lead, frequently a good bunch of each. They calculate on selling about 150 tons of blende, and 5 tons of lead, before the next account meeting, which is supposed to take place about the 20th inst.—J. B.: Redruth, Dec. 27.

CORNUBIAN MINING COMPANY.

At the last meeting of the directors and shareholders, held on the 15th ult., it was agreed that Capt. Middleton, of the East Wheal Rose Mine, should be appointed to examine the Cornubian and Ventongimps Mines, and report thereon, so as to enable the shareholders to come to some decision as to the real state of those mines, and whether the company should be dissolved or not. Monday last, the 29th ult., being the day appointed to receive such report, the directors and shareholders met at their office, Finsbury-square.—PETER STAINSBY, Esq., in the chair.—The CHAIRMAN stated to the meeting the object for which they had assembled, and submitted to their consideration the report of Capt. Middleton, and also a letter from Capt. Rowe, in which he stated that Capt. Middleton had, in his opinion, made a great mistake in his calculations. The following letters, from Capt. Middleton and Rowe, were read:

Shepherd's-street, Newlyn, near Truro, Dec. 22.
SIR,—In compliance with your request, I inspected the Cornubian and Ventongimps Mines on Saturday last, but under very unfavourable circumstances—the mine being filled with water to the adit. The only solitary chance left on the Cornubian Mine is, to ascertain whether the adit south in the lawn, to ascertain whether there is not some other lode near at hand, if so, I consider the ground to be congenial for lead, and this may be tried for a small sum of money. At Ventongimps, I inspected the mine at the adit level, and found the lode to be uniform, and made of such material as cannot be supposed to fall in depth; but, it is with regret, I have to say that I could not descend into the interior part of the mine, it being filled with water; but, from the reports of the captains (Rowe and Grose), who I believe have given me a true statement, and it has also been confirmed by many others of the neighbourhood, that lead has been found at the 10 and 18 fm. levels, and, at the 18 fm. level, a bunch of ore, for 4½ fms. in length, is now to be seen, and should the water be drawn out, be worth 20L per fathom. Taking for granted, gentlemen, that the foregoing is correct, this mine will work by you or others, but no other company have an equal chance with yourselves, as you have materials sufficiently adapted in all departments for the thorough trial of these, and all bunches which may be discovered in working these mines; and I find, by a matured calculation, that the engine may be taken away from Cornubian, and removed to Ventongimps, with necessary erections for the working of the mine—such as engine-house, boiler-house, stack, smithy, carpenter's shop, an account-house, changing-house for men, and pitwork included, &c.—and the mine wrought, in a miner-like manner, to the depth of fifty fathoms below the adit, for an outlay of 3500L, reserving the present materials, or a part, which may be required in erecting the above-named articles, and for the extension of the same, and I doubt not there will be enough materials remaining to the amount of several hundreds of pounds. Against this sum, gentlemen, I say nothing about the amount of ore; probably one-half, or the whole of the amount, may be realised, or a larger sum. Taking the foregoing account, as a disinterested man, I should consider it almost imperative on you to make the necessary trial.

Cornubian Mines, Dec. 27.
SIR,—In reply to yours of the 24th inst., I beg to say, that the ore has been all taken away above, and at the 18 fm. level: in Ventongimps, we followed the lead ground as deep as the water could be kept without steam power. The length and worth per fathom, stated in Capt. Middleton's report, should have been said: "gone down below the 18 fm. level." In my letter to you of the 25th inst., I also noticed an error in the report, as to trying the mine for 3500L to a 50 fm. level. I consider it should be to a 30 fm. level for that sum; perhaps these things had better be explained at the meeting. R. ROWE.

Mr. LEA observed that, however satisfactory the report of Capt. Middleton might appear, the contradiction to several parts of it by Capt. Rowe, did away with the impression he had formed of the accuracy of the investigation, and it would have been much more satisfactory to the company had both these captains consulted together on the subject previous to the report having been sent to them, as they then might have been enabled to have formed some idea of the real state of the mines, but at present it was really impossible to form any accurate idea on the subject. This meeting was convened for the express purpose of coming to a decision whether the mines should be continued or not, and he hoped, before they departed, they would come to some determination, and conclude one way or the other, as he was tired of these meetings one after the other, at which nothing was done, and no result came to that could be satisfactory.—The CHAIRMAN then read the return that Mr. Welsh requested at the last meeting, which, however, gave nothing of particular importance: he stated, on an inquiry being made, that, on the 9th of May last, it had been resolved to remove the great engine to Ventongimps from the Cornubian Mine; but that, on the whole, it would be at least two years from that period before it, as well as the shafts, could be well established, and the cost would be about 6800L.—Mr. LEA wished to know if the chairman had the different reports before the water was drained?—Several letters, more properly speaking than reports, were read, detailing the workings that had been done from the 5th of March, 1844, from which it appears, that the Ventongimps Mine had been sunk to the 18 fathom level.—One of the SHAREHOLDERS inquired, if Capt. Rowe had ever given any account of the Ventongimps and the Cornubian, and what were his real opinions as to the state of them—whether they were worth incurring the expense the company was at in keeping them or not?—The CHAIRMAN replied that, he certainly had, and he thought from his statement, that it might be advisable to prosecute the working, if that the necessary funds were forthcoming.—Mr. SCOTT believed that the presence of water indicated that there was ore; but, as he was not experienced in mining pursuits, he should be glad to know?—The CHAIRMAN, in reply, said that it shows that the lode is open, and acts as a drain for the surrounding country; but that the presence of water did not always indicate that there was ore, although it was certainly a favourable criterion to go by.

Mr. LEA observed, that there was every encouragement in Capt. Middleton's report, but Capt. Rowe's contradiction caused a very great doubt.—The CHAIRMAN said, the main point to consider was, whether the bunch of ore stated to have been discovered was of a fine quality, and what quantity there was likely to be obtained?—A SHAREHOLDER wished to know whether the mine was really worth going on with, there being water in it?—The CHAIRMAN replied, that the water could be removed by the steam-engine; the working was 18 fms. under the adit. The East Wheal Rose was four miles from thence, and the distance from the Cornubian to Ventongimps was 250 fathoms; the lode that runs through these mines was the same as that of the Murray shaft.

Mr. COPE considered that a new company might be formed to work these mines.—A SHAREHOLDER inquired, if any offer had been made for the mines, or good will, and what it was likely the machinery would return?—The CHAIRMAN replied, that the machinery was good, and no doubt would fetch its value. He had never had any positive offer himself, but that Capt. Paul, in one of his letters, remarked that it would be well to dispose of it, if an offer could be obtained.—Mr. LEA considered it would be better to dispose of it, or form a new company.—The CHAIRMAN said, that he thought it was not advisable to expend another shilling on the old mine, but that he looked to that of Ventongimps.—Mr. LEA was for issuing new scrip, giving the priority to the old shareholders.—The CHAIRMAN said there had been a new creation of 1200 shares, at the rate of 2L.—Mr. SCOTT said, there appeared to be new ground, and the question was, whether it would not be better to have an advance of 2L. or 1L. 10s. on each share to work it?—The CHAIRMAN replied, that it would be impossible to work till a new shaft had been sunk from surface.

Mr. LEA inquired the largest quantity of ore raised in any one month?—to which the CLERK replied, 65 tons.—Mr. JAMES asked, if the chairman considered that Ventongimps had had a fair trial?—The CHAIRMAN: As a miner, I should certainly say not.—Mr. SCOTT said, of opinion, that 2500 out of the 8500 shareholders, would advance from 1L. 10s. to 2L., if there was a chance of a beneficial result in working it, sooner than abandon it.—On being appealed to, the CHAIRMAN said, that he was in favour of Capt. Paul's recommendation; the quality of Ventongimps is not so good as silver as the Cornubian was.—A SHAREHOLDER inquired, if they did not think it would be better to advertise the mine for sale, offering the good-will to work it.—Mr. COPE

and he would be glad to pay up to the last penny for the working of the Ven-
eranda, as he considered it ought not to be abandoned, if there was any
chance of success.—Mr. JAMES was for dissolving the company.

Mr. LEA inquired, what would be the expenses per week, even were they to
wait until the mine could be put in proper working? The CHAIRMAN replied, 60l.
per week.—Mr. SCOTT thought, that the shareholders in general ought to be
informed by advertisement, previous to the dissolving of the company.—Mr.
CORP said that, out of three directors, only one had paid up his shares and
attended their meetings.—Mr. LEA observed, that he would sooner throw up
the whole of his shares than continue a concern at the expense of 60l. per
week for nearly two years, without seeing the probable chance of any return
for his money.—Mr. SCOTT was against advertising the mine, as it would be
highly prejudicial; but, if there was any chance of the proprietors of the East
Wheat Rose making an offer, or if any of the shareholders or the chairman saw
a chance of disposing of it, he would advise that course to be adopted.—The
CHAIRMAN replied, that he was so situated as not to be able to take any part
in Mr. CORP's proposal, as the leasehold of the mine was in his name—indeed,
he was sadly afraid that there was no chance of disposing of it, but a new com-
pany might be formed from among the present shareholders to work it.—The
following resolution was then proposed by Mr. LEA, seconded by Mr. CORP,
and carried unanimously:—"That the directors be recommended to call two
general meetings of the shareholders to consider the propriety of dissolving this
company, and of adopting such measures as then may be deemed expedient,
as to disposing of the mines and property, and winding up the affairs of the
company, or to adopt such other measures as the shareholders may then think
best for carrying on this company."—Mr. CORP intimated to the chairman that he
had better write to Capt. Middleton and Howe, to inquire if they knew of any party
likely to enter into negotiations for the mine; this would certainly be the last
"scrip" undertaking he would ever have anything to do with.—A vote of
thanks was given to the chairman, when the meeting separated, apparently
not over pleased with the result of the speculation in which they were embarked.

STRAY PARK AND CAMBORNE VEAN MINING COMPANY.

A special meeting of the adventurers was held in the account-house, on the
15th ult., at which were present, Messrs. Williams, Hodge, Roberts, Tom, Vaw-
drey, Reynolds, Lanyon, Higga, Hosken, Bazeley, Hambly, Jeffery, and
Richards.—The CHAIRMAN having read the circular convening the meeting,
Mr. WILLIAMS proposed to grant to Stray Park adventurers a moiety of
"Wheat Francis sett," subject to the payment of 350l. to the executors of Mr.
Thomas Teague.—Resolved, that this meeting do not recognise any right or
claim of Mr. Williams to make such a proposition, and that the same be re-
jected accordingly.—Resolved, that the copy of the above resolution be im-
mediately forwarded to Mr. Robinson, the steward of Lady Bassett.—The resolu-
tions were agreed to by all, excepting Messrs. Williams and Hodge, Jeffery,
and Richards, who declined to vote.

Another special meeting was held at Messrs. Watson and Cuell's, St. Michael's
alley, London (as stated in our last), at which were present, Messrs. Smith,
Williams, Desborough, Vawdrey, Grove, Abbot, Marling, Mackay, Gillet,
Johnson, Watson, and Cuell.—The notice convening the meeting being read by
the CHAIRMAN, Mr. WILLIAMS stated that he has the promise of Lady Bas-
sett of the grant of the whole sett of "Wheat Francis," and offers to the Stray
Park adventurers one-half of the same.—Mr. VAWDREY having produced an
original agreement from the late Mr. Reynolds, promising the grant of Wheat
Francis sett to the Stray Park adventurers, and their acceptance of the same,
they, the Stray Park Mine adventurers, feel they have an equitable title to the
whole of the sett, and therefore resolve, unanimously, that Mr. Williams's offer be
rejected.—Resolved, that a committee be appointed to consider and decide on
the measures proper to be taken for obtaining the sett from Lady Bassett, by
deputation to wait upon her ladyship, or otherwise; and that they do report
their proceedings at a subsequent meeting of the Stray Park Mine adventurers,
to be held in London. That the committee do consist of Messrs. Smith, Des-
borough, Grove, Abbot, and Mackay, and that three be a quorum.

PENTYRE GLASE LEAD AND SILVER MINE.

SIR,—Can you, or any of your readers, give me information respecting this
mine, at Padstow, in Cornwall? I wish principally to know, if it is working
with any prospect of profit to the shareholders.
Leicester-square, Dec. 20.

MINING IN 1845—WHEAL FRANCO.

SIR,—In your remarks on the progress of mining, after giving a list of those
mines which have proved profitable during the year 1845, you add a list of those
which may be expected to prove so in 1846. As there is a considerable differ-
ence in the state of forwardness of many of these mines, with regard to the
sinking of shafts, opening levels, machinery, dressing floors, and other requisites,
to enable a profitable working to be made,—I beg you will make this excep-
tion in favour of Wheal Franco, which has all the above requisites—is in full
work, and more than paying cost, with every prospect, from the quantity of
ore ground laid open, of soon commencing the payment of dividends.
Plymouth, Dec. 30.

A SHAREHOLDER.

ON THE NATURE OF BLENDE (BLACK JACK) LODES.

SIR,—I should feel indebted to some of your intelligent correspondents,
whose valuable remarks, on mineral veins, appeared in your Journal, about
two years since, if they would enlighten me a little concerning the nature of
blende (black jack) lodes.—What their direction generally is? What the size?
To what depth the ore lasts? Whether most favourable for copper or for
lead? What mines of this description have been productive? and whether,
in short, it is desirable to work lodes of this character? Pryce, in his *Mineralogy*,
writes, "that black jack is commonly found with stones of copper and lead
intermixed with it; but it seldom, or never, has any tin. It is a bad sign of copper
ore." And in the *Geological Report*, we find this observation, "The sulphurets
of zinc (black jack of Cornish mines), seems also to occur in bunches, being
very frequently associated with the sulphuret and with the oxide of tin. Not
being an ore worth raising for profitable purposes, at present, its mode of occur-
rence is less a matter of inquiry than it otherwise would be."—E. J. Jan. 1.

[ADVERTISEMENT.]

THE MINING ESTATE OF LAMERHOOE.

SIR,—I noticed, in your last week's Journal, the letter of Mr. F. S. Thomas,
commenting on the manner in which he was treated, by the proprietors of Lam-
erhoove Mine, at their last meeting—in which he says, by what I wrote, that
I presumed he was afraid to go there, because he could not substantiate the
charges he had brought against Mr. Edwards and Mr. G. W. Snell; that he
considered my saying so was a challenge, and partly an invitation, for him to
attend. I beg to say, Mr. Thomas is perfectly correct in that opinion. I
meant it so; and if Mr. Thomas had come only to hear what passed, and not
insisted on his right to be there, by virtue of the proxy he held, I for one would
have desired his withdrawal. Mr. Thomas also is pleased to say, that I
am a friend of Mr. Edwards, and also of Mr. Snell. I may say, so far as regards
being on friendly terms with gentlemen (who are as much strangers to me as
Mr. Thomas) against whom I never heard any thing disreputable in any way
whatever, I am their friend; but if Mr. Thomas means to imply that I am the
friend of any one shareholder in this company more than another, for the pur-
pose of securing any matter relating to the company, or in any way smother-
ing faults, which any one has committed—then, I beg leave to say, Mr. Thomas
was never more mistaken. What I have written in opposition to Mr. Thomas
was my own act, on my own responsibility; and no one ever knew that I
intended to write it; therefore, whatever blame may attach to my former letter
belongs to myself only, and I am quite willing to bear it; but I defy Mr. Thomas
to give a more correct, legal, and just opinion upon that subject.

It is a pity, Mr. Editor, your reporter did not give every word that was ut-
tered at the last meeting, because the public mind would have been much better
informed of the real facts of the case. I dislike hiding a fault in that way—
(and whenever I find the devil lurking in some invisible corner, I like to seize
the scoundrel at once, and then, by fair, open, argumentative combat, we shall
see who is right; but I do not mean this to apply to any individual personally,
but I mean it as a general feeling on my part)—therefore, I think, had your
reporter given the whole of what was said, Mr. Thomas would have been much
better satisfied and the public also, because they would then have had an op-
portunity of comparing notes. I wish, Mr. Editor, you had been at the last
meeting—because we should then have had a fair report of the explanations
entered into by Mr. Edwards; but, as it has been withheld by your reporter, I
will supply some part; and, to show the partial account given you by the re-
porter in last week's paper, he says—the chairman was called to order by a
proprietor, for the strong terms he used in reference to Mr. Thomas, and this
proprietor charged the chairman with taking 500 shares in this mine, for which
he never paid one penny; but he does not give the reply made to that by Mr.
P. Davey, who said, (before the last resolution was quite disposed of)—"Some
might, perhaps, think that two or three of the original connectors of this com-
pany had taken an unfair advantage of the shareholders: he himself came in
at the original cost of 5l. per share—therefore, had not received any special
favours. Various things presented themselves to every one, by which they
might trade fairly and honourably, for the purpose of making money; and it
is the business, and even duty, of every person to obtain the best profit he hon-
ourably could, for the outlay of his capital, and the exercise of his judgment
and talents; and as far as he (Mr. Davey) was concerned, he had nothing to
complain of. Mr. Edwards was perfectly justified in taking the shares he holds,
and making the best profit he could of them—that, if Mr. Edwards had a good
estate for nothing, he had also greatly benefited the shareholders by admit-
ting them to participation in the profits to be derived, at a small cost."

I perfectly agree with Mr. Davey; and as I know the mine is an exceedingly
rich and valuable one, having personally inspected it, instead of complaining,
I am much obliged to Mr. Edwards, and all the other original promoters of
this company, for selling me the shares I hold, and whatever they may hold
for nothing they are welcome to; but Mr. Edwards is not alone free of cost in

this matter—Mr. Thomas himself also had his shares for nothing. He was
pleased to profess to act as agent for Mrs. Williams; but it is a well-known
fact, and documents can be produced to prove it, that Mr. Thomas acted
throughout for himself entirely, placing the shares in the name of Mrs. Wil-
liams first, and afterwards into his son's name, for what purpose he can fully
explain. I am neither a zealous partizan of the chairman, nor a particular
friend of Mr. Snell, more than any other person's, neither am I an enemy to Mr.
Thomas; and I think there is no man to be found so great an enemy to Mr. T. as
himself; but he is also exceedingly generous. He says now, he gave the chair-
man 500 shares; and also shows, by his own letter, that he was not worth one
shilling at the time. Then, why give away such valuable property? What
could he do that for? He must, Mr. Editor, have had some equivalent for it;
he might as well have added, money was wanted to secure the set; and but for
Mr. Edwards advancing 200l. as a deposit, Mr. Thomas would never have had
it at all. Here, then, is the equivalent for Mr. Thomas's gift, and a very good
one it is. Mr. Thomas describes fully his last insolvency, and now says Mr.
Snell knew it before. This is a gratuitous piece of information, but Mr. Snell
denies the truth of that statement.

It seems, by Mr. Thomas's last letter, he has been badly used by others.
He always seems to get into some difficulty; he might as well have given the
world the cause of bankruptcy in 1827, and also his insolvency in 1836, with
the last this year; he might, also, as well give a reason why he did not include
420 shares in this mine, as personal property, in his last schedule—because, it
is a well known fact now, that they always were his own property; yet he
could find it convenient to call the Almighty to witness, that he spoke the
truth, and these 420 shares snugly withheld from his creditors. Some people
may call Mr. Thomas a clever man; but I consider, in this whole affair, he is
most ridiculously silly. I heard him say, provided the lease was put right, he
could get 20l. each for 200 shares; and he comes and tells the proprietors the
lease can be put right for 150l. Then, I ask, why didn't he sell 10 shares, and
buy up May's extension letter, and quietly pocket his profit, which would then
amount to near 4000l.? This, I think, is a very nice little sum for a man, who,
a few weeks before, had not one shilling to help himself with; and then he
would have 210 shares left worth 4200l. more. This is a pretty personality,—
but what a very conscientious man Mr. Thomas must be, to live upon the pub-
lic, and keep this little nest egg. I have no desire whatever to injure Mr. F.
S. Thomas. He says he is largely concerned in legitimate mining; and, if he
approves the set, he puts it fully and completely to work. What absurd non-
sense this is—because, in his former letters, he there gives a long account of
how he proceeded to sell the shares of Lamerhoove Mine before ever the ground
was touched; indeed, he had no money to do it with, which he clearly shows in
his last letter. Mr. Thomas's conduct towards this mining company, ever since
8th November last, has been exceedingly reprehensible; still he must injure
himself quite as much as any other person. He has grossly slandered the
chairman, the purser, and finance committee: he has held them up to public
execration most unjustly, in my opinion. They are gentlemen well known as
highly respectable merchants and traders in London, of well known honour
and integrity of character; and as we have all been so violently attacked by Mr.
Thomas, I say to him, let him that is without fault cast the first stone. Let
Mr. Thomas clean his own hands, before he calls in question the characters of
other men; but the whole affair with Mr. Thomas, since 8th November, has
been most supremely silly on his part; but I hope for the future he will learn
wisdom, and be as prosperous as he himself may wish for.

I do not wish to prolong this dispute; but whatever I may see of Mr.
Thomas's further writing upon this subject, reflecting in any way unfairly on
myself, I shall always reply in such way as I may think fit; and with regard
to all proxies, the holder of which is not a registered proprietor, I will always
oppose his being heard.—HENRY SMITH: Trinity-street, Borough, Dec. 24.

[ADVERTISEMENT.]

MINING IN THE ASTURIAS.—MR. COWARD AND CAPT. MATTHEWS.

SIR,—I am always pleased when I see your Journal crowded with ad-
vertisements. Separated from the crowd of the 6th inst., stands one of tedious
length—though not of fearful note—being a mass of the writer's own biog-
raphy, self-praise, cant, nonsensical wagers, and petty comments on words, with-
out a tittle of argument on the two letters, which it seems has provoked his
communication. Discussing, as I submit he ought, the chances of mineral
wealth in Cabrales, justifying, in detail, his extraordinary reports and work-
ings at San Esteban Mine, proving that he had cut the lode at Carabia, satisfy-
ing the mining world as to his lode at Fayedo being 90 ft. big, with a back, tower-
ing like 120 ft., yet made up of decomposed and decomposing rock, and
that the said lode was in a country, which ever had been, and ever would be,
looked upon as "the theatre of extraordinary terrestrial convulsions," convinc-
ing the public that Mr. Paillette—who is, indeed, a clever man—joined him
in the said report, and showing that it was not wisely stopped, denying that
the English gentleman, at Infesto, had shown zeal, perseverance, and judgment,
and that he was not worthy of the good wishes of his friends and the
public, and refuting the report which he knew was made at the annual meet-
ing of the Asturias Mining Company on the said mine; proving, by facts and
figures, that there was 3600l. worth of cinnamon ore in sight at La Eugenia
Mine, as stated by him in March last, and that A. Z.'s calculations of the value
of the whole, when dressed in September last, was incorrect. Had Capt. O. H.
Matthews manfully met the letter by the foregoing arguments, or opinions, it
might not have been necessary for me to have taken notice of his letter; but
the course he has taken, renders it imperative for me to reply. My reply I
wish to go to the poor, as well as to the rich. Capt. O. H. Matthews addresses
the wealthy only; and now considers the "circle of miners," who gave him, as
he says, the recommendation of being a competent mine at 22, beneath his no-
tice. But more particularly to the letter: first, I beg, as an especial favour, that
your readers will carefully revise the letter of A. Z. in your Journal of the 11th
of October; I believe they will not find in it anything that would call a man
who had, and really was, doing his duty—A. Z. reports, and gives opinions; if
such opinions and reports were unsupported Capt. O. H. Matthews should
have calmly discussed, and, if necessary, disproved them, instead of losing his
temper, &c., &c., &c., but let the galled jade wince."

I believe that the heading of an article is left to the judgment of the Editor;
Capt. O. H. M., from ignorance or design, takes your heading—"Mining in
the South of Spain"—as part of the letter of A. Z.; and with a like motive does
he dwell on the word *southern*, in the letter of the pilot, which is an error, the
article being headed "Ports in the Asturias"; but if otherwise, it would have
been unnoticed by a man of sense—Capt. O. H. M. must have a weak case, and
a weaker head; or he would not have tried to support his case by decided and
palpable errors; I pass over one in his letter—namely, "11th," which I suppose
he intended to be that of A. Z. of the 24th.

Capt. O. H. M. says that the letter of A. Z. will be highly injurious to
himself with whom he has the honour of being associated, *this I deny*, and
content that it is more likely to benefit than to injure. He says that the scale
in which A. Z. has weighed him, is a shattered instrument; be that as it may,
yet he is awfully alarmed at the weight which the shattered instrument has
given to the public of his mining ability. It is not at all times safe for the
jackass to kick at the supposed dead lion, for, as Falstaff says, "The lion may
counterfeit." Capt. O. H. M. says that his character is "his stock in trade,"
so it is mine, which he has done all in his power to weaken, and would have
done more, if he had not been constrained by the letter of the 17th of June, 1844,
to which I refer him.

Capt. O. H. Matthews tells us, that so prominent was his mining genius and
application, that at the age of twenty-two, he was declared by a large circle of
miners and mining gentlemen, to be a man thoroughly competent to take the
management of any mine—"a man so various that he seemed to be, not one,
but all men's epitome." Do you hear this eye-first-rate Cornish agent? who
have laboured hard, and have the good sense to know, that you have yet something
to learn, before you are thoroughly competent to take the management of any
mine, meaning, of course, all sorts of mines: in my opinion, the most certain
recommendation for a Cornish agent is length of servitude, it being a proof that
he has had the ability to discover, and a talent to work. Capt. O. H. Mat-
thews hops from one berth to another, with the same ease as he would from one
old shoe to another, and with as little benefit. A first-rate mining agent would
not consider it necessary to ask for a written character, preferring reference to
his works, as the safest recommendation. When I read the word "Cowardly,"
I wrote the following letter to Capt. O. H. Matthews:—"Sir: In the *Mining*
Journal of the 6th, I find you use the word 'Cowardly'—do you apply the
same to me? If your answer be yes, I will put my cowardice into my 'horse-
whip,' which will put your valour to some proof."

Capt. O. H. Matthews devotes so much of his time (not valuable) in sport-
ing, that I am not surprised at his being so apt at quotations; in reply to
which, I beg to assure him, that I will "keep the bird in full view," and shall
have no difficulty in unearthing a rank fox. I am not disposed to offer or ac-
cept wagers; but I should like to know the amount of money which he offers
in his bet of 99 to 100, as to the autographs. He says, that I am an enemy of
him, because he would not recommend the working (of what he calls) "tinny
mineral developments." I never showed Captain Matthews but six concerns,
two out of the "tinny mineral developments he is working"—two of which he
is now working, and, as he says, at a profit; therefore, are not very "tinny." I
objected to showing him any other mines,—being satisfied, that though he
might have been, as he says, a good miner at 22, yet that he had actually re-
trograded in the last 25 years—he being now, I suppose, near 50. The Eng-
lish gentleman who is working the mines in Cabrales, which were my property,
has gotten therefrom, in a few months, upwards of 70 tons of ore. The mine
which Capt. Matthews bought of the Colonoa tailor, for 50l. cash, and other
conditions, was indeed "tinny." He gives reference to his working plans—A
copy of that of San Esteban is now before me, and I engage to prove, through
your Journal, that there never was a plan which more clearly shows a want
of mining skill. He states that his mines are paying their monthly cost,
and leaving a surplus sufficiently large to pay good interest on the capital expended.
Had he shown this by "facts and figures," it would have been most satisfactory

to me, being lord in two of them; but I own, Mr. Editor, that I have no ex-
pectation of dues of any worth under his management. Capt. O. H. M. says,
that I am his personal enemy—perhaps I have a *mainly* cause for being so; but
one thing is certain, that I have not shown enmity to the extent I might—
namely, of insisting on his dismissal from the mines of San Esteban and San
Antonio. By reference to the company, he will find that I have that power.
To suit his own purpose, he accuses me of using your heading,—and he carries
on his falsehood by saying, that I do not know the difference between "beau-
tiful kills" and "carboniferous shale," and that I reverse the cardinal points
as to mineral veins. Had any of the Cornish agents, who have known me for
the last 15 years, said as much, I should have owned my ignorance to them.

He denies the honesty and correctness of the information which I have given
through your Journal. I defy him to prove the want of honesty or correctness.
I beg to state, that I am alike indifferent as to his opinion of me as a man, or
as a miner: his good report would be an injury. In no respect can I be affected
by his wagers, or insinuations; nor are the clerks, or other persons, that I have
the pleasure to have with me, at all alarmed by anything that such a scrib-
bler as Capt. O. H. Matthews can do. He says that I was at Gijon on the 7th
or 8th of Sept. I deny that I was at Gijon, or near Gijon, on 8th September.
He speaks of my friend, the pilot of Gijon; I beg to assure him that that gen-
tleman will not hesitate to enter Rivasdelas, or any other port, though they
should be filled with Capt. O. H. M's.

He says, Mr. Editor, that he has given you a clue to the whole scheme. In
my humble opinion there is no scheme, except it be a scheme of his own crea-
tion; and, therefore, any new impressions which his *wealthy friends* may gain,
will, I hope, be gotten from what I have said; if not, I beg to assure them, that
they will find me at command, their most obedient servant. Captain O. H. M.
speaks of his unknown Helston friend, who I much doubt being a miner, but
if a miner, I hope that he uses his pick with better effect than he does his pen.

I believe, Mr. Editor, that I have gone into everything that is necessary;
and in future, when I have the honour of appearing in your columns, I trust it
will be in a matter more interesting to the public, and agreeable to myself.

Please accept my best thanks for the insertion of my letter, and that of Se-
nor Zifuentis, and believe me, yours truly,
NOAH COWARD.

Infesto, December 29, 1845.

IMPROVEMENTS IN THE SEPARATION OF METALS.

Patent granted to Mr. JOHN TAYLOR, of the Adelphi, for Improvements in
separating Metals from each other, and from certain Combinations with
other Substances.

The invention has reference to the separation of silver from ores or
metallic combinations containing that metal. The patentee first describes
the principal methods now in operation for the extraction of silver from
its ores and metallic combinations, which are—

1. The process known under the name of the eliquation process, in which the argen-
tiferous substance, whether ore, regulus, or metal, is mixed and melted with lead, or some
combination of lead, when the silver is obtained in combination with the lead from its
great affinity for that metal.

2. The amalgamation process, in which a chloride of silver is formed by mixing com-
mon salt with the ore or regulus in calcination, which chloride of silver is again reduced
by means of metallic iron and mercury, the chloride passing to the iron, and the silver
forming an amalgam with the mercury.

3. A process for which a patent has recently been obtained, the object of which is,
the obtaining silver from various known descriptions of copper regulus, procured by smelting
argentiferous copper ores, by concentrating the main portion of the silver into a residuum;
this is to be effected by thrice-repeated calcination of the regulus, having for its object the
formation of as much sulphate of copper as possible, and lixiviation of the sulphated ma-
terials with sulphuric acid and water; after each calcination, the undissolved residuum
from each of the first two calcinations is to be melted with some material containing
sulphur, so as to form it again into a regulus; the residuum of each lixiviation becomes
richer from the sulphate of copper and iron being dissolved out, and from only a small
portion of the silver being removed as sulphate. When the contents of the first residuum
are 100 parts or more of copper to 1 of silver, it is reduced into a regulus by melting with
partially calcined copper ore or iron pyrites, and this regulus is sulphated and lixiviated
as before, and the product is a residuum containing less than 100 parts of copper to 1 of
silver; this is subjected to the same process, and the product is a residuum containing
less than 50 parts of copper to one of silver; this residuum is called the rich sulphate re-
siduum, and is to be calcined and digested in sulphuric acid, nitric acid and water, and
the silver precipitated from this solution; the residuum of this operation is to be added to
a residuum containing less than 100 parts of copper to 1 of silver, and melted as above
described, or the silver is to be obtained from the rich sulphate residuum by melting it
with lead or litharge. A portion of the silver is obtained in each calcination in the state
of sulphate, and is washed out by sulphuric acid and water with the sulphate of copper;
this silver is to be precipitated.

In describing his invention, the patentee divides it into two parts,—1st, the formation
of a chloride of silver, and the dissolving such chloride of silver by any of the hereinafter
mentioned solvents; 2nd, the converting the whole, or practically the whole, silver con-
tained in an ore or regulus into a sulphate of silver by a process of calcination as here-
inafter described, the other metals contained in the ore or material treated being rendered
insoluble. The sulphate of silver thus formed dissolves out by hot water.

He then proceeds to describe the means adopted for the attainment of these objects;
and first, as regards the chloride process of extraction. The argentiferous materials, which
it in all probability will be desirable to treat, may be divided into two classes,—those
containing sulphur, and those containing no sulphur.

First, as regards sulphurous material. If the material to be treated is a regulus of cop-
per or iron, it is preferred first to granulate such regulus by allowing it to flow when hot
into water; it is then calcined in a similar furnace to those used for calcining copper re-
gulus, for a time varying from 12 to 36 hours, according to the nature of the regulus un-
der treatment and the quantity in the calcining furnace; 24 hours' calcination for about
3 tons of copper is found to be a very suitable time; during this calcination a moderate
fire should be kept up, sufficiently low to prevent the regulus caking; the material should
be stirred or turned over once in about every 2 hours. The object of this process is to
volatilize a portion of the sulphur, by which means nearly the whole inconvenience arising
from the caking of the material in the subsequent calcination is avoided; the regulus so
calcined is then ground, and passed through a fine sieve. A sieve of 60 holes to the square
inch is well-suited to this purpose. In the same manner, sulphurous ores, on which it might
be desirable to melt, from its being already sufficiently rich in silver, and needing no
concentration, would be most advantageously treated by calcining it as above described
previous to grinding it, in order to prevent the formation of lumps in the after-process of
calcination; having been calcined, it is then ground to a fine powder, and treated in the
following manner, which is equally applicable to calcined regulus. The furnace to be
employed is a simple reverberatory calcining furnace, of such size as to enable the work-
men constantly to rake the ore lying on every part of it. The heat on the introduction
of every fresh charge should be moderate, gradually increasing until it arrives at a bright
red heat, approaching yellow; the operation usually lasts from 2 to 3 hours, during which
time the material operated on must be constantly raked, for the purpose of thoroughly
oxidizing the copper, iron, and other metals contained in the ore or regulus; a test should
now be made of the state of the material operated on; this is done by withdrawing a small
portion, and at once, whilst still hot, pouring water on it, and allowing the water to pass
through it; should the water appear colourless, or nearly so, the operation of calcination
has been carried sufficiently far; but should it be blue or green, the calcination must be
persisted in until the green or blue colour disappears from the liquor derived from the
lixivation of a small portion withdrawn from the furnace as described, thus, until the
whole of the sulphate of copper and iron has been decomposed. When this has been ef-
fected, chloride of sodium (common salt), or any other suitable chloride, is to be added in
the proportion of from 4 to 5 parts of salt to 100 parts of the substance treated; a less pro-
portion will do, but to ensure the whole silver being converted into a chloride, the above
proportions have been found advantageous. The heat of the substance operated on should
be reduced previous to the addition of the salt, in order to avoid a too great evaporation
and loss of chlorine. On the addition of the salt the material should be well-stirred for
some time, and a degree of heat maintained sufficient to cause the chlorine or muriatic
acid to rise in almost invisible fumes, in which the argentiferous substance should be al-
lowed to remain for some time. A test may now be again made for the purpose of proving when
the calcination has been thoroughly performed; this consists, as before, in withdraw-
ing from the heated furnace a small portion of the substance treated, and pouring over it
a hot saturated solution of chloride of sodium (common salt), taking care not to add too
much. If this solution is clear and colourless, and becomes, when cold water is added to it,
of a whitish colour, the calcination has been complete; but if the solution takes a bluish
or greenish colour, the calcination must be continued until the bluish or greenish colour
disappears from the solution, and it remains colourless, as above described, when water
is added it assumes a whitish colour. The operation may be hastened by stirring over
the substance in the furnace another half-pound or pound of common salt for every 100
lbs. of material in the furnace; and the whole must be constantly stirred, as above de-
scribed. So great is the affinity of silver for chlorine, that it has been found, in many in-
stances, sufficient to rake the material which has been calcined out of the furnace, and
while hot mix it with salt, when the desired chloride of silver has been produced. Should
the material it is desired to de-silverise contain no sulphur, or other substance which it
is necessary to volatilise or oxidise by such a calcination or calcinations as above described,
common salt, in the proportions before given, namely from 4 to 5 of salt to 100 parts of
the substance, may be at once added; and the argentiferous material
placed immediately in the furnace, and treated in precisely the manner above described
that adopted for the formation of a chloride of silver in argentiferous regulus or ore,
beginning from the point at which the addition of common salt is directed. The addi-
tion of a small portion of sulphurous material, such as sulphurous copper ore, iron pyrites
or sulphate of copper, has been found to facilitate this operation. A chloride of silver
having been thus formed, the argentiferous ore, or substance prepared as above, is to be
washed or lixiviated with a hot saturated solution of chloride of sodium (common salt),
or any other suitable chloride, alkali or earth, or with a solution of hyposulphite of soda,
or hyposulphite of potash, or any other suitable hyposulphite of an alkali or earth which
will dissolve the chloride of silver, separating it from the insoluble portions of the material
treated. From this solution the silver may be precipitated by any of the known methods;
precipitated copper has been found an exceedingly good means of effecting this operation.
The heat at which it has been found most advantageous to employ chloride solutions is
its boiling-point, or at least 60 deg. R. or 175 deg. F. The temperature of the solution
is necessarily effected by the temperature of the substance when subjected to lixiviation.

Hypsulphite solutions need not be so hot, as their solvent power is greater.
To ascertain that all the silver has been precipitated, a piece of bright copper, or new
copper coin, may be put into the solution in the precipitating vessels. If these maintain
their colour, the liquor may be drawn off, as the precipitation may then be considered
complete; but if they come out silvered, it may be considered that sufficient time has not
been given for the complete precipitation of the silver.

If the material treated has been copper regulus, some chloride of copper will of neces-
sity be in the solution, as also if copper has been used for precipitation. The liquor, in
this case, from which the silver has been precipitated, may then be passed into vessels con-
taining iron, free from oxide scale, where the copper will be thrown down, together with
any silver which may have remained unprecipitated; and the copper thus obtained may
be used for precipitation of silver, as above described. It may be desirable to economise,
as much as possible, the salt used in this process, in which case the lixiviated residue may
be further washed, and the liquor obtained preserved together with that obtained from
the precipitation, and having been brought up to the boiling-point, may be again
used for the extraction of further quantities of silver.

The second part of the invention consists in the separation of silver from ores, regulus
or metal, silver contained in any ore or regulus into a chloride of silver, and then sepa-
rating the other metals contained in the argentiferous substance.

Original Correspondence.

THE PROSPECTS OF THE IRON TRADE FOR 1846.

SIR.—The following correspondence bears so closely upon the views long entertained in your Journal respecting the prospects for iron, and the probability of its admission into France, that I am induced to send you a copy of it:—

Dec. 29.—“I shall be glad to have your opinion of pig-iron, as connected with the railways already authorised by Parliament, and allowing for a material reduction in the schemes deposited for the approaching session; likewise the influence a relaxation in the present Custom-house regulations in France would have upon this article.—The following paragraph in the French King's Speech is favourable to the admission of materials into France to complete the new railways. The King says—‘My Government has applied itself to prosecuting the execution of the great works which you have voted; the necessary measures for bringing them to a conclusion will be submitted to you, &c., &c.’ A supply of iron beyond the quantity the French works produce is a necessary measure to bring the French railways to a conclusion, and the above paragraph connected with the late discussions in France, on the subject of the quantity of iron made there, compared with the demand for it, augurs favourably for a relaxation of the duty on British iron on importation into France.”

Dec. 30.—“Our opinion is, that pig-iron will be much higher in the spring. The railroads last session, and those going on previously, will take all the iron that can be made. Some lines will get their bills next session, and, perhaps, for as many miles as were obtained last session, but anything passed next session cannot interfere with the make of 1846. If the French are to take iron from us, and we cannot see how they can complete their works in any reasonable time without foreign supply, prices will go up, and we should not be surprised to see Scotch pig at 5*l.* to 5*l.* 10*s.* in six months. We believe the stocks of Scotch pigs in all foreign markets are very small, and in the hands of consumers in this country they never were less. We think a regular advance will take place early next month. Buyers are now offering 77*s.* 6*d.*, cash freely, but no sellers.”

From an inspection of the prices of iron during this year, 5*l.* to 5*l.* 10*s.* for Scotch pig is under the highest price that has been obtainable, and that before 2400 miles of railway received the Royal Assent in the last session of Parliament. Hence, allowing for a material reduction in the schemes deposited for the present session, and without foreign demand, the prospects for iron fully authorise the maintenance of (if not an advance upon) the price of 12*l.* now obtainable for rail; and Welsh pig, being so much under its relative value, compared with rails, should participate in the improved value of the manufactured article.—*MERCATOR: Dec. 31.*

VICTORIA IRON-WORKS—IMPROVEMENT IN MACHINERY?

SIR.—I was induced, by reading the article, headed “Important Improvement in Machinery,” which is copied into your valuable paper of last week, to make a purposed journey of some twelve miles to see the same. The property being pretty well studded with steam-engines, pits, &c., I had some difficulty in finding out the pit at which the “wonder” was to be seen. The pit was oval, and about 17 ft. by 11 ft.; after waiting a little time, the signal was made from the bottom of the pit to “pull up,” the loaded tram of iron being then at the top of the incline plane; a strong horse was attached thereto, and, after two or three efforts at drawing down the plane, the pit bucket being the heaviest, the horse, tram, iron, and all, was as often drawn up the plane—in fact, the horse was overpowered. A shower of curses, loud and deep, arose from the bottom of the pit, together with the cry of the banksman to hitch on t’other horse; a second horse was accordingly applied, when, with two horses and two huihlers, the tram descended the plane, and up came a good-sized bucket of spoil. This was speedily discharged, and the horses, working knee-deep in puddle and dirt, attached to the opposite end of the tram; the signal was given for lowering the bucket into the pit, and the horses commenced bringing their load up the plane, in doing which they stopped once or twice, but, by the application of some whipcord, the use of which both man and boy seemed to well understand, the top of the plane was once more gained. Need I say that I had seen “enough.” Disgusted with my folly for undertaking such a wild-goose chase, I mounted my poney and rode off, not, however, without an expression or two by no means complimentary to the inventor (!) of the affair, or the writer, who proved himself such a snoddy, as to deceive himself into the supposed cleverness of the motion. I am quite sure that one horse, inferior in power to either of those I saw, would, if his power were applied in the common and ordinary manner, perform double the work I saw these two horses perform, whilst the boy would be all sufficient as a driver, instead of, as at present, a man and boy. If no better system than this be adopted generally at Victoria, of which this deponent sayeth not, the prospects of the proprietors must, indeed, be gloomy. I was a little amused, on being interrogated by a pretty looking girl, from whom I inquired my way to the pit—“If I was a gentleman from London, and belonged to the law?” Not understanding what she meant, I smiled and passed on.—*INQUISITOR: Jan. 1.*

SUBSTITUTION OF THE MAGNET FOR AMALGAMATION.

SIR.—The great loss of mercury, and the expensive and tedious method of separating gold by amalgamation from the ferruginous particles with which it is associated in South America, induces me to recommend in its stead the magnet, which I find very readily and completely separates the particles of iron and its protoxide from the auriferous grains mixed with them. A powerful magnet, then, may be advantageously and economically substituted for the process of amalgamation. *J. MURRAY.*

Portland-place, Hull, Dec. 24.

RESOURCES OF IRELAND—PEAT—AMMONIA.

SIR.—In a recent Number of the *Mining Journal*, you gave a statement of the extraordinary extent of peat bogs in Ireland, with suggestions for applying the peat to the manufacture of iron. This, I have no doubt, could be effected with advantage, provided there was in reality any want of iron in the United Kingdom; but it appears to me that, even with the present unprecedented demand, there is no actual want of iron—the deficiency, if any, must be merely in the power of machinery, to work it into the form of railway bars. You quote Scotch pig-iron at 3*l.* 10*s.* per ton; rails, at 12*l.* 10*s.*—a wide margin to cover the expense of, and waste in, the conversion, providing the demand for rails should continue long enough to warrant the outlay of a large sum in machinery—but, I should say, the bogs of Ireland were not the best locality for such establishments; for my part, I should prefer the English counties of Northumberland and Durham, on the banks of the Tyne, or the Tees, where coal is abundant and cheap. The application of the surplus peat of Ireland to the over-worked and worn-out corn fields and meadows of England, would be a much more valuable and important use than attempting to make iron with it. The agricultural interest of any country must be regarded as the first and most important, but, unfortunately, in the United Kingdom, it is much depressed; it seems a century at least behind the other great interests, from some cause or other—as Mr. Cobden would, no doubt, say, from the vicious policy so long upheld by the owners of the land. Some change may now be looked for, when I hope to see the agricultural follow in the footsteps of the other great interests—the mercantile, the manufacturing, and the mining. No one can tax English farmers with want of industry; as a body, there is not a harder working class in the community; but the deficiency is in enterprise, the want of a little scientific research, and the judicious outlay of capital upon improvements. With all his facilities for conducting farming operations, and the good markets close at hand, which our large towns and populous manufacturing and mining districts afford for the produce, there is no reason why an English farmer should fear the competition of foreigners, excepting that the land has been expected to do too much. Nothing is more grateful than land; whatever is expended upon it, provided it is done judiciously, will be returned many-fold, but the land of England has been starved out—every particle of produce has been taken from it that it was possible to get, and little returned to it. Recourse has been had to guano and stimulants—like giving a man, with a keen appetite, a glass of Huxham's tincture of bark, or his Grace of Norfolk's pinch of curry powder, as a remedy against starvation. The beneficial effects of guano upon land, fully charged with vegetable matter, have been most remarkable; but upon poor land, wanting such supply, the effects of guano have proved worse than useless. Let the guano merchants look to the peat bogs of Ireland as a powerful auxiliary. The completion of lines of railway in the two countries, will facilitate the transport of peat from the bogs of Ireland to the corn fields of England, to be there well ploughed into the fallows, and afterwards treated with guano. All the effects of stable or farm-yard dung, will be thus secured in a more certain and perfect manner. Stable and farm-yard dung are compounds of, otherwise inert, vegetable matter, impregnated with animal, containing salts of ammonia, which fit the whole for manure; but, as these must of necessity remain—some for many months—accumulating, and other portions be used quite fresh, the active principle of one portion must be, in a great measure, wasted; while, in others, it has not become matured. The use of peat and guano, while it supplies the deficiency of the other manures, will insure more certain results. It will be a pity to see

large sums paid annually to the Government of Peru for guano, when a compound of minerals, to be had at home, may be formed to yield the only essential principle of guano—ammonia; for this compound, Ireland, too, will furnish the most important ingredient from its abundant mines of sulphur ore.—*A HERMIT IN FURZES: Dec. 30.*

HALEY'S PATENT LIFTING JACK.

SIR.—I observe, in your last week's Journal of the 27th inst., an account of “Haley's Patent Lifting Jack.” From the description, and from an inspection of a model, in the Museum of the Society for the Encouragement of the Arts, in the Adelphi, this jack exactly resembles that for which a reward was given by the Society of Arts to Abraham Stagholt; for a model of a jack for raising weights, in the year 1771. It would be well if inventors, and others interested in mechanical inventions, paid a visit to the interesting museum of that venerable and truly useful society, before they incur the expense of taking out a patent. Unfortunately, from the premises of the society being at present limited in size, the models cannot be afforded sufficient space for easy inspection; but so many really useful inventions and discoveries in the fine arts, in processes and apparatus connected with the manufactures of Great Britain, have been rewarded, that every patriotic individual should visit the rooms of the Society of Arts. The beautiful paintings of Barry, in the Great Room, are well worthy of a few hours' contemplation; and all those, who wish to encourage the rising genius of our nation, would do well to enrol themselves as members of the Society of Arts.—*S. PARLEY, M.S.A.: 12, St. George's-terrace, Kensington New Town, Dec. 29.*

RAILWAYS IN SPAIN—AVILES TO MADRID.

SIR.—The late naturally expected exposures connected with the projected railroad from Aviles to Madrid, which have appeared in your Journal, have satisfied me that the suggestions and inquiries which I offered to the public through your paper, were worthy of the serious attention of my countrymen. Mr. Kelly states, in a letter to the Editor of the *Times*, dated 15th May last, inserted in your paper of the 17th May—“I feel happy to be able to state to them that I am, at this moment, in receipt of information (derived from a source competent in every engineering point of view), confirmatory of the perfect practicability of the line.” I am sure it would be satisfactory to the public, if you were to call upon that gentleman, to say upon what authority he made that statement, and thereby made your paper a channel of misleading parties, who have embarked in the Royal North of Spain Railway. *A RESIDENT IN THE ASTURIAS. Oviedo, Dec. 20.*

DR. SLEIGH'S HYDRAULIC POWER.

SIR.—I observed, in a former Number of the *Mining Journal*, some just animadversions on a new hydraulic power, which a Dr. Sleigh professed to have discovered—viz., the motion of an expansive cylinder, caused by the pressure of a column of water acting on the principle of the hydrostatic paradox. The plan appeared to me highly ridiculous, still, if Dr. S. has brought his design to any greater perfection and found his model to act to his satisfaction, I, for one, shall be most gratified with an explanation, and shall feel extremely thankful to the inventor. I thought your remarks perfectly just.—*HYDROGEN: Battersea, Dec. 31.*

VESUVIUS.

SIR.—I perceive that Prince Albert of Prussia has had his coat burnt by a red-hot cinder ejected from Vesuvius. I remember Prof. Forbes, of King's College, Aberdeen, whom I met on his return from Italy, in 1818, informed me he had met with a similar occurrence; I was more fortunate, though I descended several hundred feet into the crater of the burning mount, in that year during an eruption. In the interior of the crater, there were three volcanic cones; two of these were ejecting pumice stone, scoria, and magnificent columns of dense white vapours, which I found were composed chiefly of muriate of ammonia. In my experimental researches in the crater, I found no trace of sulphur; aqueous vapour, hydrochloric acid, and muriates of soda and ammonia, were products of the eruption. I observed an efflorescence here and there of chloride of sodium; and sometimes a very copious deposit of common salt, lined, and even occasionally filled, the cavities of the lava. My clothes were saturated with salt from the saline atmosphere I traversed. One of the conical mounds had its crater full of glowing lava; and, as it “rose into day,” and the liquid fire flowed over the edge of the crater, the brilliant effulgence was intensely vivid and dazzling. The river of liquid fire was slow in its progress, as it rolled onward towards the place where I took my station to watch the moving flood. The depth might be about seven or eight feet, and the stream was of no great breadth, so that I could easily retreat to another part of the crater; my shoes were in part burnt to a cinder. In the crater, and before the memorable eruption of 1822, my old friend, Chevalier Carlo di Gimbernat (then *Chargé d'Affaires* for the Government of Bavaria, at the Court of Naples, and with whom I had, while at Naples, many an interesting geological excursion), erected a glass apparatus to condense the aqueous vapour, so that the bold adventurer might here sate his thirst, amid the burning regions of Cyclopius fire. *J. MURRAY.*

Portland-place, Hull, Dec. 24.

P.S. In last week's *Mining Journal*, you have misprinted appropriation for appropriation; and twice, chlorine of sodium for chloride of sodium.

SCIENTIFIC PARADOX—CARBONIC ACID

SIR.—To my last inquiry respecting chlorine, Dr. Murray kindly favoured us with a lucid explanation, and another correspondent, with a rather more uncourteous, and, by no means, a clear, one; as, however, I do not profess to be a practical chemist, and write to elicit facts which may be of general utility, I freely pass by his remarks, on my ignorance, &c. Another apparent anomaly in chemistry has struck me, which, however, no doubt, is capable of explanation. In the use of the blow pipe, the air from the mouth has passed through the lungs, and been deprived of its oxygen, or, rather, the latter has combined with carbon, and formed carbonic acid. If, then, the gases respired consist of carbonic acid, with some nitrogen, both non-supporters of combustion, how do they combine with the flame of the lamp to cause such intense heat, to liquify glass, the metals, and perform other similar operations? Doubtless, some of your scientific readers will favour me with a reply.—*CHEMIST: Highbury, Dec. 30.*

EXPERIMENTS ON STEAM.—At the Paris Academy of Sciences, Mr. Regnault read a paper relative to his experiments on steam. The Minister of Public Works assisted M. Regnault with the means of making these experiments on an extensive and practical scale. The questions to be determined by M. Regnault, were—1. The law which unites the temperatures and elastic powers of aqueous vapour at saturation. 2. The quantity of heat absorbed by a kilogramme of water at 0 degree, to be converted into steam for saturation at different degrees of pressure. 3. The quantity of heat absorbed by the same quantity of water in order to raise the temperature to the point in which it assumes the state of vapour under different pressures. 4. The specific heat of aqueous vapour at different stages of density, and at different degrees of temperature. 5. The co-efficients of dilatation of aqueous vapour in different stages of density. In his present paper, M. Regnault gives the law of the elastic powers of steam up to 230 degrees centigrade, which temperature corresponds to 28 atmospheres and a half. He next fixes the total heat of steam taken at calorific pressures, from 1-5th to 15 atmospheres; and finally, he treats of the calorific capacity of water from 0 to 190 degrees. Many distinguished men have devoted their attention to the elastic powers of steam. We may mention Achard, Greu, Dalton, Christian, Arzberger, Watt, Robinson, Bétancourt, Schmidt, Southern, Ure, Gay-Lussac, August, Kaemtz, Dulong, and Arago; the two latter of whom commenced their experiments in 1823, at the request of the Minister of the Interior, and published an account of them in 1829. They carried their operations up to 25 atmospheres. About the same period, a commission of scientific Americans performed a series of experiments on this subject, but went up to only 10 atmospheres. The results, however, of these different experiments were not alike, consequently M. Regnault had to take entirely new ground, greatly aided, however, by the progress which science has made since the period alluded to. In his results, he agrees most with MM. Dulong and Arago, particularly as regards high rates of pressure. Watt had supposed that the total quantity of heat necessary for the transformation of a kilogramme of water into the state of steam was certain under a constant pressure. The number obtained was 660. This law, although not exemplified by any precise experiments, has been until very lately regarded as positive, and so adopted in theory and practice. M. Regnault, however, has ascertained that this number increases constantly from 622 under the pressure of one-fifth of an atmosphere up to 670 under 15 atmospheres. At the ordinary pressure the average of 88 experiments gives 636.37. As to the calorific capacity of water it is 1,000 between 0 and 50 deg., 1,005 between 50 and 120, 1,013 between 120 and 180.

CRAGGILLAN IRON WORKS.—We learn that the Hon. Colonel Macdonald Cathcart, of Craggillan, has recently let the iron in Craggillan estate to the Messrs. Houldsworth, of Manchester and Glasgow. The ore is understood, the richest and most abundant in this part of Scotland. Operations are being commenced, and Loch Doon, with its ancient castle, will soon be illuminated by those blazing furnaces—that signal over our corn hills and valleys, the wealth and enterprise of our merchant princes.—*Ayr Advertiser.*

terial to be treated is a sulphurous ore or regulus, it is to be operated on precisely in the manner already described above, as regards the preparatory calcination of argilliferous ore or regulus, with the ultimate view of forming chloride of silver. This part of the invention may be considered to begin from the point at which the ore or regulus has been finely pulverized, after the calcination of the granulated regulus or ore. The ore or regulus is then placed in a calcining furnace, which must be well-provided with a current of atmospheric air passing over the substance heated; and the charge should be constantly raked throughout the whole of the operation. This operation lasts generally about 3 hours, and depends entirely on the good management of the furnace and constant attention to the state of the material acted on. At first the heat must not be great; a moderate heat may be gradually given, until it at length arrives at a full red heat, approaching yellow. This must be done very cautiously, and during the whole operation the following test must be constantly put in practice. A small portion of the material treated is withdrawn from the furnace, and water, free from chlorine, poured on it whilst hot, or hot water must be used; the liquor thus obtained is then tested by adding a few grains of common salt; when the operation is not complete, the liquor, when first obtained, will be bluish, and when salt is added greenish. The silver, when only a small portion has been formed into the liquor obtained from the test; and when salt is added, chloride of silver will be at once thrown down, falling to the bottom of the liquor in thick white flakes; when this appearance is given by the test, the operation of calcination may be considered to be complete, the whole, or practically the whole, of the silver being in a state of sulphate, the copper and iron having been oxidized, and thereby rendered insoluble. The material may then be withdrawn from the furnace, and dissolved with common boiling water, care being taken that it shall be free from chlorine, or only contain a trace of chlorine.

If the material dissolved is sufficiently hot, the water need not be boiling. From this solution the silver may be precipitated by any of the known methods; and the completeness of the operation may be tested by adding a few grains of salt to the liquor taken from the precipitating vessels; if the liquor remains clear the precipitation is complete. The residue obtained from large quantities has been found to vary from 3000 to 3000 parts of copper to 1 of silver, and were therefore practically wholly de-silvered. Regulus or sulphurous ore may also be at once heated in a calcining furnace, having been first pulverized, without any previous calcination, as above described. In this case very slow heat must be given for the first part of the process, during which time the sulphur contained in the regulus or ore undergoes combustion. After a time this combustion ceases, and the process described as the invention for the conversion of the sulphuretted silver into sulphate begins, and may be performed precisely in the manner pointed out to be practiced on the regulus already previously calcined and afterwards ground. This is not considered an advantageous manner of working, from its being impossible to prevent the formation of lumps, which must be separated from the fine parts before dissolution and again ground and calcined; and also from the necessity of passing the calcined material through a sieve, by which the whole benefit of the heat is wasted; also from regulus being much more readily pulverized when granulated and calcined; and from the saving of labour effected by calcining 3 tons, or a large quantity instead of a small quantity, which must be the case if the process of calcination is performed at once. Should it be desired to treat by the sulphate process an ore which in itself contains no sulphur, and at the same time inadvisable to convert it into a regulus, a small portion of sulphur in any shape, such as sulphurous copper ore or iron pyrites, may be mixed with it, so as to afford sufficient sulphur to combine with the silver; it may then be calcined, as before directed, particular attention being paid to the test. For the purpose of fixation, a round tub, fitted with a strainer formed of a disc of wood, pierced with holes, a disc of basket-work, and linen drawn over the whole, answers the purpose well; tow being packed round the sides between the strainer and the tub, the liquor runs off perfectly clear.—*Chemical Gazette.*

MINING IN FURNESS.—A valuable discovery of iron ore has recently been made on a range of hills called Ricket Hills, by Messrs. Town and Rawlinson, of Dalton—the event was celebrated in a worthy manner by the enterprising owners, who assembled all their workmen to a substantial good old English supper, at which numerous appropriate toasts were drunk: previous to which the company drank “Success to the Undertaking,” at the pit mouth, when Mr. P. Hartley, of Ulverstone, addressed them as follows:—“I rejoice with you all on this very auspicious and important discovery. The finding of this mine is, to all appearance, of the highest consequence to the interest and future prosperity of Dalton, especially the labouring part of it, and is worthy of the highly respectable company it belongs to. But in naming respectability in this pointed way, permit me to add, that all the other mining companies of Furness are also highly respectable. However, I can say, in reference to Mr. Rawlinson, that this discovery has done him great credit. I am told it is the first real mine that has been found in this locality in the memory of any person living. You see it is a domain never before attempted upon; hence it must have been skill and judgment that guided him to the undertaking. I am happy to state, also, that Mr. Rawlinson, in all his undertakings, has been entirely successful, which is, indeed, a great thing to say. I do not know anything of mining, but I have had much pleasure in going over the different works of Messrs. Town and Rawlinson—and, professing to know something of mechanics, I declare that I was astonished to find the contrivance and mechanical skill—and more, the adaptation, in a scientific way, of every movement to the object to be obtained: scarcely is a cotton mill fitted up with more correctness than I witnessed there.”

ARTIFICIAL ASBESTOS.—For a specimen of this substance, I am indebted to Mr. W. Murray, of Monkland; and, for a very accurate analysis of it, to his son, Mr. F. Murray. It was found in a blast furnace, imbedded in the mass of matter which had collected at the bottom of the furnace in the course of two years and a half, and which is technically called the hearth; it was in a cavity, about eight inches below the level on which the liquid metal rested, and was interspersed with distinct and beautiful crystals of titanium. In all its general characters, this substance corresponds with asbestos. It is colourless, inodorous, and tasteless—and occurs in small masses, composed of extremely minute filaments or fibres, cohering longitudinally together. These fibres are very easily detached from each other—and are flexible, though not so much so as the common asbestos. They have a silky lustre, and are unattacked by sulphuric, nitric, or muriatic acid. They remain unchanged in the flame of a spirit lamp, and are difficultly fusible even with the blowpipe. A preliminary examination having been made to ascertain the ingredients contained in the substance, ten grains of the longest and cleanest of the fibres were selected for analysis. This was the largest quantity that could be obtained free from adventitious matter. The process adopted was the one usually recommended for the analysis of insoluble siliceous minerals. The following are the results per cent.—Silica, 72.5; alumina, 9.0; protoxide manganese, 13.2; magnesia, 2.0; lime, 1.58; iron, 2.65; total, 100.93. On comparing the above with the analyses that have been given of the several varieties of asbestos, we remark, that the artificial specimen contains about ten per cent. more silica, and that magnesia, of which there is twenty-five per cent. in natural asbestos, is replaced by the protoxide of manganese. Now, it is well known that the protoxide of manganese is isomorphous with magnesia; and hence, this replacement of the one by the other is at once explained. I apprehend the substitution of manganese for magnesia will be found much more frequent in the mineral kingdom, when minerals are submitted to improved methods of analysis. The occurrence of asbestos in an iron furnace affords a beautiful proof of the igneous origin of this substance.—*F. PENNY: Prof. Phil. Soc. of Glasgow.*

PEE ROSES.—Mr. Richard Barney, rope manufacturer, of this town, has just completed the largest pair of flat ropes ever made in this neighbourhood; they are 2500 feet in length, and nearly five tons in weight. The frequent accidents and loss of life which have occurred from the breakage of iron pit ropes, are fast bringing the flat hempen ropes again into use, and our spirited townsman appears disposed, and is every way capable, to take advantage of the change in public opinion, as the colliers observe the hempen ropes “give notice before they break, but the iron ‘uns don’t.”—*Worcesterhire Chronicle.*

MINE ACCIDENTS.

Toftshaw Bottom Pit, Hunsworth.—An explosion took place here, by which five persons have lost their lives, among whom are a father and his two sons, J. H. and A. Walker, and W. Hughes and J. Scholefield. From the evidence adduced, it appeared that the men were provided with safety lamps, which were in good order, and the stewards continually enjoined them not to go into the workings with naked candles; on the morning in question, however, the elder Hughes took candles down the pit, having left his lamp at home, and they had been at work but a very short time when the explosion occurred. It appears that every attention was paid to the safe state of the pit, which is the property of the Bowling Company, and one of the stewards went down every morning to inspect the workings.

Barnfield Colliery, Rowley Regis.—W. Shelton was killed by a fall of earth.

Newbury-lane Colliery, Dudley.—T. Slater was killed by a fall of coal.

Rushall, near Birmingham.—T. Dunning and J. Bent were employed to brick the shaft at Mr. W. Sparrow's ironstone pit, and, on Saturday, had succeeded so far as to have quoined about one-half—the shaft being about 17 yards deep; while re-fixing the scaffolding, to quoin the remainder, a quantity of sand fell from the sides above, forcing the scaffolding down, and buried the men; Bent, being above his companion, succeeded in getting his hand through the loose sand, and was thus saved from suffocation. The most praiseworthy efforts were made to rescue the men, and Bent was drawn up, but Dunning perished.

Lee Brook Colliery, Wednesbury.—S. Easthope was killed by an explosion of fire damp.—J. Green was also injured at the same time.

Hill Top, West Bromwich.—R. Nicholls was killed by a fall of coal.

Levant Mine.—As W. Grenfell was leaving his work in the 54th level, he fell into a “scuttle hole,” about 16 fms. deep, and was killed.

Nantyglo Works.—A poor boy had one of his legs cut through, and the other dreadfully lacerated, by the machinery, from which he is not expected to recover.

Mesbro, near Erington.—C. Lawin was killed in Mr. Wells's Colliery.

Melne Colliery, Ardsley.—A destructive fire was observed to issue from one of the shafts here, on Tuesday last, which, it is said, originated from the fire at the bottom of the shaft having been made excessively hot, so much so as to cause its combustion of the surrounding bed of coal—which, blazing up the shaft, ignited the coal, and the head gear was speedily destroyed. Fortunately, however, although ten men were in the pit at the time, no serious damage sustained is considerable.

Current Prices of Stocks, Shares, & Metals.

MINING OFFICES, 16, CORNHILL.—Mr. R. TREDINNICK (of Cornwall) having established **PRAGMATIC AGENTS AND CORRESPONDENTS** in every MINING DISTRICT, whereby he obtains early and accurate information respecting MINES, and offers his services to capitalists and adventurers in the PURCHASE and DISPOSAL of SHARES. From the success consequent upon the working of mines both in England and Ireland many of which yield from 30 to 50 per cent. upon the outlay.—Mr. Tredinnick can with confidence recommend investment therein, as being not only highly remunerative, but holding out peculiar inducements at the present time, from the low price at which shares in many can be obtained. Mr. Tredinnick affords every information, on personal application, gratuitously, and can recommend competent Agents for inspecting and reporting on mines.

PROGRESS OF FRENCH MINING INDUSTRY.

(FROM OUR PARIS CORRESPONDENT.)

A French newspaper, published in Brazil, devotes, in one of its recent numbers, considerable space to details respecting the lately discovered diamond mine in the province of Bahia; but they contain nothing that has not already been published in the *Mining Journal*. People were flocking in crowds to the mine; and many of the sugar plantations were entirely abandoned by their owners, in order that they might try to enrich themselves by searching for diamonds. The mine has already produced diamonds valued at 18 million francs, or 730,000*l.*, though it was only discovered thirteen months ago.

Yesterday, the Council-General of Agriculture, Manufactures, and Commerce, entered upon the discussion of the question proposed by the Minister of Commerce—whether iron from the north of Europe should be admitted free, or at an extensive reduction of duty, for the steel manufactures? The debates were very languid and uninteresting. Instead of refuting them, I will lay before you an abstract of the document presented by the Minister to the Council, to enable them to form a correct judgment on the matter. It is as follows:

—In 1848, one of the Government engineers was dispatched to England to study the steel manufactures, and to point out what France could advantageously learn from them. He found that the steel manufactures in our country imported the greater part of the iron they needed from Sweden and Norway; and he came to the conclusion, that as French iron did not offer, in sufficient quantity, or at sufficiently moderate price, the inferior qualities necessary for the fabrication of steel, it would be advisable to admit, free of duty, iron from the north—limiting, however, such admission strictly to what might be required by the steel manufactures. Before the Government could decide upon the matter, a proposition was made in the Chamber of Deputies, that the reduction should be carried into effect; but it was eventually postponed to the present session, to enable the Government, in the meanwhile, to consult the persons peculiarly interested. After this brief introduction, the document goes on to say, that the production of steel in France is not in the same proportion as in England and Austria; and that it has only been inferior to that of the German Association since 1843. In 1842, England produced 205,000 quintaux metriques; Austria now produces 130,000; France, 23,400; German Association, 80,000; the other States of Europe, 66,600; the total production of Europe thus amounting to 575,000. The percentage of each country is—England, 45½; Austria, 22½; France, 16; German Association, 14; other European States, 12. But, notwithstanding this inferiority of France, her production has not remained stationary. In 1831, it was only 53,795 quintaux metriques; in 1832, it was more than 71,000; and in 1843, the latest year for which returns have been made, it was 98,394. The increase, then, in 12 years, has been at the rate of 75 per cent.

From the want of information, a comparison of prices cannot be made between the two periods; but the present price, in France, of natural steel in bars is 72 frs. 40 c. the 100 kilogrammes. England has no natural steel. The price of the steel called *cementé*, is 64 frs. 25 c. the 100 kilogrammes, in France; in England, it is 56 frs. 28 c. Foundry steel, in France, is 96 frs. 48 c.; and in England, 70 frs. 51 c. Each of these three descriptions of steel has its separate uses. The first is fit for the fabrication of sharp tools, saws, cutlery, &c.; the second is generally employed in most industries; the third is used for delicate works—such as watch springs—and is capable of being highly polished. Natural steel is obtained by the immediate refining of ore, or of cast iron. In France, there are employed (what are called) the *forges blanches*, and the *forges grises*, and, in some localities, the ores furnished by the mines of the Pyrenees. The manufactures can easily, on the failure in France of any of the necessary materials, obtain them from abroad—the present duty being so moderate as 4 frs. the 100 kilogrammes. It is not, therefore, with respect to the natural steel, that the free importation of the iron of the north of Europe can be considered necessary; but the reduction would be entirely for the steel *cementé* and for steel *fondus*, as they are respectively called. The former is manufactured in the French forges concurrently with French iron, and the iron of Sweden, Norway, and Russia; the latter is principally produced by the manufacturers of the neighbourhood of St. Etienne. France has lately made great progress in the fabrication of cast steel, the invention of which is due to a humble Yorkshire workman of about a century ago. In 1834, France produced only 2659 quintaux of this description of steel; in 1844, it was 8578; and in 1843, 16,221; but, notwithstanding this great increase, it is still far inferior to that of England, she having in 1843 supplied all her immense wants, and exported 45,000 quintaux. It is chiefly by the aid of Swedish and Norwegian iron that she has been able to give the immense development of her steel manufacture, of which she can this day boast, and France seeks to obtain the same results by the same means. The consumption of steel in France appears to be greater than of other European states. In 1843, it was 101,217 quintaux, of the value of 7,844,471 frs.; 7823 quintaux being from foreign countries. The demand is increasing daily. The abolition of the duties on Swedish and Norwegian iron, would enable the steel manufactures to profit by a reduction of about 42 per cent. on the prices of their materials, and would, consequently, enable them to make improvements in their productions, to lessen their prices, and to supply all the demand. The reduction would not injure the ironmasters, as due precautions would be taken to prevent iron being introduced into the country for other purposes, under pretence of being designed for the steel manufactures. Such is the case made out in favour of the reduction or abolition of the existing duties.

But, it is urged in opposition, that the superiority of Swedish iron for manufacturing into steel, is peculiar to some particular forges, not inherent to the whole; and that the French forges, which already manufacture iron, equal to that of the second-class of Sweden, can in time produce iron equal to the first-class. It is that object which should be striven for, and not the exclusion of French iron altogether from the manufacture of steel. The example of England is not a case in point—she takes the iron of the north of Europe, because she has none of her own fit to be converted into steel, whilst France has all the materials necessary for the manufacture of all descriptions. Moreover, the reduction of duty, that would be obtained by the abolition, would be perfectly insignificant; so much so, that it would only make a shade of difference in the selling prices of articles manufactured from steel. 1,500,000 kil. of iron would, on the abolition of the present duties, be imported into France, and that quantity, at the highest rate of duty, would pay only 270,000 fr., which would be so small a sum, as to be of no advantage whatever to the steel manufactures. Lastly, the government has received information, that, in Algeria, ore has been discovered, which possesses all the qualities of the best Swedish iron, and it would be far better to employ that, than to seek the aid of the foreigner.

From this recapitulation of the arguments in favour of, and against, the abolition, you will perceive that there is really no crying necessity for an alteration in the existing tariff, though it might just as well be granted as withheld. The matter, however, is not at all to be compared with the case made out for the reduction of the duties on iron for shipbuilding. The facts set forth in my last letter will have satisfied you, and any impartial person, that it will be a scandalous injustice to the shipping interests, and it may be added, all other interests, if the present duties on iron, destined for the shipyards, be maintained. A short time will show what view the Chamber of Deputies will take of the matter. No doubt, notwithstanding all that the Councils General may say, or vote, it will have the good sense and the patriotism to declare, that an abolition, or, at all events, a great reduction, of the existing exorbitant duties, shall be effected.

A royal ordinance, dated the 24th, ordains various reductions in imported articles; among others, on lead ore of all descriptions, to 10 c. the 100 kil., if brought in French vessels, and to 3 fr. 80 c., if brought in foreign vessels.

The King's Speech, on the opening of the session, promises that laws for new railways shall be presented. New railways will require additional millions of tons of iron; but where are they to come from? The ironmasters of France are they to come from? The ironmasters of France are at present overwhelmed with orders, and iron is becoming every month dearer and dearer. Does not the extension of railways imperatively call for a reduction of the import duties, so as to enable companies to get their rails at something like moderate prices?

MINING COMPANY OF IRELAND.—The half-yearly meeting of this company was held at their offices, Dublin, on Thursday last, Dr. BARKER in the chair.—The report of the directors, for the half-year ending the 30th November, was read, by which it appeared that the company's workings had been most prosperous, and that the prospects for the future were highly favourable.—The report produced general satisfaction.—A dividend at the rate of 12½ per cent. on the subscribed capital was declared, payable on the 1st of February.—Professor Kane was deputy-chairman.—The detailed particulars will appear in our next.

RAILWAY PROGRESS.—From the official returns that we have been favoured with, it appears that the amount of traffic for the last week, on nearly 1,800 miles of railway, was 131,460*l.*; thus accounted for—59,937*l.* for the conveyance of passengers; 27,596*l.* for the carriage of goods; and a remainder of 34,527*l.* for passengers and goods together, not respectively apportioned: being an increase over the corresponding week of last year, of the amount of 15,629*l.*

THE SHARE MARKET.—We have still to note a continued improvement in mining generally, and have this week to refer to some observations and tabular matter in other columns, as convincing proofs of the correctness of such remark. The share market also continues to exhibit continued firmness in favourite mines.

RAILWAYS.—In consequence of the settled state of the Ministry, and the pacific nature of the news from America, and the good understanding existing between Great Britain and all other countries, the money and share markets have been firm, with a decided increase in business, both in the registered shares and scrips of new companies. The settlement went off satisfactorily, and stock came forward more readily than was looked for. There is no new feature in the market for foreign scrip, but on the whole the prices are fully maintained. The speculators and jobbers in railway scrips and shares are anxiously looking forward to the assembling of Parliament, which is convened for the 22nd inst., for the despatch of business; and the House will have no little work to perform during the present session, in fully investigating the numerous bills, plans, &c., that will be brought under their consideration. The transactions that now take place are *bona fide* ones, and a general improvement is now manifesting itself at Manchester, Liverpool, Birmingham, Glasgow, Edinburgh, and Ireland, in railway transactions. The following are the prices of a few of the praiseworthy lines:—London and Birmingham stock, 220 to 225; South Western shares, 76 to 81; Brighton, 68 to 70; Great North of England, shares, 215 to 220; Midland, stock, 153 to 158; Great Western, 80 to 85; London and York, 11 to 12½; Paris and Orleans, 49 to 50; ditto to Rouen, 40 to 41; Rouen and Havre, 12½ to 13½.

RAILWAY MEETINGS.—On Tuesday last, a public meeting of the inhabitants of Coldstream and neighbourhood, was held in the assembly-room of the Newcastle Arms Inn, to take into consideration the disadvantages to the district, and, especially, to the property and trade of Coldstream, if the line betwixt Berwick and Kelso, in connection with the Berwick and Newcastle Railway, be carried into effect, and to adopt such means as may be deemed advisable, for obtaining a change of the line, by crossing the Tweed at or near to Twisell Castle, and thence proceeding on the north side of the river, close by the town of Coldstream, to Kelso; a deviation which, in every respect, would be more beneficial to the interests, not only of the towns of Kelso and Coldstream, and this important agricultural district, but of the company, by which the said line is to be formed. The meeting was numerous and attended. Mr. Thomas Jopling, J.P., was appointed to the chair. Letters from Mr. David Robertson and Mr. David Milne, advocate, approving of the object of the meeting, were read. After a few observations by parties interested in this undertaking, and a committee having been appointed, it was resolved—"That when communication with Mr. Hudson had been made, if the committee shall consider that a personal interview with that gentleman will be advantageous, that they be requested to send a deputation of their number to wait upon him."—On Saturday, the 27th ult., a special general meeting of the Leeds and Bradford Company was held at the Midland Railway station, Leeds. Mr. George Hudson, M.P. (the chairman of the board of directors), presided. The object of the meeting was to confirm the agreement entered into by the directors, for amalgamating the Leeds and Bradford Railway, with the Manchester and Leeds, and providing a joint station at Leeds, to be used by the Manchester and Leeds, the Midland, and the York and North Midland Railways, and for other purposes. The resolution for amalgamation was moved by the chairman, and adopted unanimously, and a vote of thanks passed.—A meeting of the shareholders in the Paris and Lyons (Ganneron's) line, was held yesterday, at the London Tavern, Bishopsgate-street, for the purpose of hearing the report of the committee of management upon the subject of the amalgamation with other companies for a similar object, which has taken place, and to hear the statement of the chairman, with respect to the allotment of shares in the amalgamated company.—Mr. Snow proposed "that the balance of shares be left to the management of the directors," which view was adopted by the meeting.—A meeting of the shareholders in the Metropolitan Junction Company is to be held, to determine on its dissolution, or its junction with a rival line. It is stated, that the larger portion of the deposits (2½ 12s. 6d. per share) has been spent, and that nearly all the provisional committee have "declined" to pay on a single share.—A meeting of the merchants, traders, wharfingers, and others, resident on the banks of the Kennet and Avon Canal, took place yesterday afternoon, in the large room of the Queen's Hotel, Swindon station, for the purpose of considering what steps should be taken with reference to the supposed intended conversion of the canal into the London, Newbury, and Bath Direct Railway Bill, promoted by the Kennet and Avon Canal Company.

RAILWAY PROGRESS.—The Staffordshire and North Midland Junction Company have complied with the Standing Orders, in serving notices on owners and occupiers, and depositing plans, &c. with parish clerks, clerks of Parliament, and private bill office, on the 31st ult.—The works of the Caledonian line are proceeding with great activity.—The northern portion of the North British line is so fast approaching completion, that it is expected the first locomotive from Edinburgh to Dunbar, a distance of about 30 miles, will be started on the 1st February.—The Dundee and Perth have made overtures of lease to the Dundee and Newtyle, with its plant and appendages.—The works on the Leeds and Thirsk line, near Bramhope and Arthington, in the vicinity of Otley, are rapidly progressing.—The projected contest between the Forth and Clyde and Union Canals with the Edinburgh and Glasgow, is now satisfactorily settled.—The Forth and Clyde Canal and the Edinburgh and Glasgow are to amalgamate, and jointly to purchase the Union Canal. The rates, for heavy goods, which have been reduced to a most ruinous rent, by the railway and canal companies, particularly the former, will be in a short time advanced to the advantage of the shareholders of both companies. The terms of arrangement are under reference to three gentlemen, who are expected to give their decision in a short time.—The works of the Scottish Central are progressing satisfactorily on all the divisions of the line. The tunnel at Cloven Craigs is considerably advanced, the shafts, six in number, being sunk to the level of the lines; the horizontal excavation proceeds on at all points, and the brick arching is executed to a considerable extent.—It appears, that the Cambrian and Grand Junction Company have made a complete redeposit of their plans and sections with the Board of Trade and clerks of the peace, and intend going on with vigour.—It is said, that the Midland Company now keep London time. The report of the engineer of the Cork, Passage, and Kinsale line, states that it is of a favourable character, having short undulating gradients; the worst being 1 in 107 for 66 chains, and 1 in 103 for 38 chains, which, however, occurring only in short distances, are, therefore, quite unobjectionable. The High Sheriff of the City of Limerick has appointed the 6th inst. to empanel a jury, to award compensation to the proprietors of the property, whose premises are to form part of the route of the Waterford and Limerick Railway.

We understand that there is to be no Railway Commission appointed for Ireland this year.

The rails on the Nottingham and Lincoln are about being laid at Callingham, and at various other portions of the line.

HULL, THURSDAY.—We have had a striking and most satisfactory change in the share market during the past week. Dullness has given place to activity, and the demand for dividend-paying stocks and the better class of scrip shares, is animated.

MESSEURS LAMONNE'S SALES.—TUESDAY.—Leeds and Carlisle (21 12s. 6d. pd.), 21 5s. 6d. Great Kent Atmospheric (21 10s.), 17 15s.; London, Hounslow, and Western (21 12 3s.); London and Manchester—Remington's (21 15s.), 21 3s.; Buckinghamshire (21 2s.), 21 13s. 6d.; Dudley, Maudley, Bromley, and Iron Bridge (21 17s. 6d.), 21 1s. 6d.; Lough and Jennepe's (41 21 8s.); Manchester and Southampton (21 31 4s. 6d.); Gole and Doncaster (21 2s.), 31 12s. 6d.; North Kent (21 10s.), 31 3s. 6d.; Gt. Indian Peninsula (21 13s. 6d.); Northampton, Banbury, and Cheltenham (21 15s.); Welsh Midland (21 10s.), 21 10s. 6d.; South Midland (21 2s.), 61 5s.; Leicester and Bedford (21 2s.), 21 2s. 6d.; North Staffordshire, Charnet, and Potteries (21 2s.), 61 4s. 6d.; Gt. Western of Bengal (21 15s.), 16s. 6d.; Manchester, Midland, and Grimsby (17 7s. 6d.), 11 18s. 6d.; North Staffordshire, Churnet, and Potteries (21 2s.), 61 3s.; Calcutta and St. George's Point (7s.), 11s. 6d.; East Indian (3s.), 11 12s.; Shropshire Union and Canal Junction Railway (21 2s.), 21 2s.; Leicester, Tanworth, and Trent Valley (21 2s.), 31 3s.; Great Luxembourg (21 19s. 6d.); Dudley, Maudley, Bromley, and Iron Bridge (21 12s. 6d.), 21 12s. 6d.; South Staffordshire (21 10s.), 31 10s.; Grand Union (11 7s. 6d.), 21 3s.; Drundak and Enniskillen (21 10s.), 21 10s.; Buckinghamshire (21 2s.), 31 3s.; London and York Extension (21 10s.), 21 15s.; Gole and Doncaster (21 2s.), 41 7s.; Cambridge and Lincoln (11 10s.), 31 10s. 6d.; Northampton, Banbury, and Cheltenham (21 3s.), 31 3s.; St. Lawrence and Atlantic (41 31).

MESSEURS WICKHAM'S SALES.—MONDAY.—Boston, Stamford, and Birmingham (11 2s. pd.), 19s. 6d.; Cornwall and Central Devon (21 17s. 6d.), 11 17s. 6d.; Gloucester, Aberystwith, and Central Wales (11 7s. 6d.), 11 3s. 6d.; Gole and Doncaster (21 2s.), 21 12s. 6d.; Irish North Midland (11 7s. 6d.), 11 5s.; Axholme, Gainsborough, and Gole (21 12s. 6d.), 21 4s. 6d.; Leicester and Birmingham (11 2s.), 11 4s. 6d.; London and Manchester—Remington's (21 15s.), 21 2s.; North Staffordshire (21 2s.), 61 4s.; South Staffordshire Junction (21 10s.), 41 7s.; Warwick and Worcester (21 2s.), 11 3s. 6d.; Harbades (11 16s.); Calcutta and St. George's Point (7s.), 11s.; East Indian (3s.), 11s. 6d.; Great Western of Bengal (2s.), 15s.

THURSDAY.—Boston, Stamford, and Birmingham (11 2s.), 11 4s. 6d.; Buckinghamshire (21 2s.), 31 3s. 6d.; Cornwall and Central Devon (21 17s. 6d.), 11 17s. 6d.; Gloucester, Aberystwith, and Central Wales (11 7s. 6d.), 11 3s. 6d.; Gole and Doncaster (21 2s.), 21 12s. 6d.; Great Kent Atmospheric (21 10s.), 17 15s.; Harwich, (11 15s.); Leicester and Birmingham (11 2s.), 11 4s. 6d.; Metropolitan Junction (21 12s. 6d.), 11 10s.; North Staffordshire (21 2s.), 61 4s.; Northumberland and Lancashire Junction (21 2s.), 11 16s. 6d.; South Staffordshire Junction (21 10s.), 21 15s.; Wexford, Waterford, and Valentia (11 7s. 6d.), 11 8s.; Barbadoes (11 15s. 6d.); East Indian (3s.), 11 17s.; Gt. Indian Peninsula (2s.), 15s.; Gt. Western of Bengal (2s.), 15s. 6d.

RAILWAY SHARE LIST.

RAILWAYS.	Paid	Closing pr. last night.	Closing pr. last night.
Aberdeen	25	54	54
Armagh, Coleraine, and Portrush—25f shares	12	—	—
Birmingham and Gloucester—100f shares	100	129½	130
Ditto New issue, 7½ dis.—25f shares	17½	—	—
Birmingham and Oxford Junction—20f shares	2	54	41
Bristol and Exeter—100f shares	70	83	85
Ditto New—33½ shares	2	8	8
Bristol and Gloucester—50f per share	20	—	57
Caledonian—50f per share	5	14½	14½
Ditto Extension—50f shares	24	31	31
Cambridge and Lincoln—25f shares	14	34	34
Ditto New—25f shares	14	24	24
Chesham and Bury	14	—	—
Chester and Holyhead—50f shares	15	16	17
Chichester and Brighton	20	—	—
Clydesdale Junction	5	—	—
Cork and Killarney—50f shares	24	—	—
Cork and Waterford—25f shares	12	—	—
Coventry, Nuneaton, Birmingham, and Leicester—25f sh.	14	—	—
Cornwall—50f shares	3	—	—
Derby, Uttoxeter, and Stafford	24	—	14
Direct Northern—50f shares	24	2	2
Direct Manchester (Remington's)—20f shares	24	2	24
Ditto Rastick's	54	—	44
Dublin and Belfast Junction—50f shares	24	—	64
Dublin, Belfast, and Coleraine—50f shares	24	—	—
Dublin and Galway—50f shares	4	—	—
Dundalk and Enniskillen—50f shares	24	—	4
Eastern Counties—25f shares	14½	214	223
East Dereham and Norwich	1	—	—
East Lincolnshire	14	24	34
Edinburgh and Glasgow—50f shares	50	71½	77
Edinburgh and Northern—25f shares	14	—	—
Edinburgh and Perth	14	—	4
Exeter, Yeovil, and Dorchester—50f shares	24	—	—
Gloucester, Aberystwith, and Central Wales—25f shares	14	—	14
Gole and Doncaster—20f shares	42½	24	44
Grand Junction—100f shares	100	—	—
Ditto ½ shares—50f shares	17½	—	—
Ditto ¼ shares—25f shares	4	—	—
Ditto 40f shares, Liverpool to Manchester	4	—	—
Grand Union (Nottingham and Lynn)	14	14	14
Great Grimsby and Sheffield—50f shares	5	—	—
Great Southern and Western (Ireland)—50f shares	15	20½	214
Ditto Extension—50f shares	74	—	18
Great North of England—100f shares	100	212	213
Ditto New—40f shares	5	48	54
Great North of Scotland	24	3	—
Great Western—100f shares	80	163	160
Ditto ½ shares—50f shares	50	94	94
Ditto ¼ shares—25f shares	20	37	38
Guildford, Farnham, and Portsmouth—50f shares	24	—	—
Harwich—20f shares	1	—	—
Hull and Gainsborough—25f shares	14	—	—
Hull and Selby—50f shares	50	102½	105
Inverness and Elgin—20f shares	1	—	—
Irish North Midland	14	—	—
Kendal and Windermere—25f shares	14	—	—
Lancaster and Carlisle—50f shares	24	48½	52
Leeds and Bradford—50f shares	15	—	—
Leeds and West Riding Junction	14	—	—
Leicester and Birmingham—20f shares	22½	14	14
Leicester and Bedford—20f shares	22½	14	14
Leicester and Tanworth—20f shares	42½	—	—
Liverpool and Leeds Direct—50f shares	24	24	24
Liverpool, Manchester, and Newcastle Junction	14	34	44
London and Birmingham	224	220	220
London and Birmingham Extension—25f shares	14	—	14
London and Blackwall	Av. 167 13s 4d	94	94
London and Brighton—50f shares	50	64	68
London and Croydon	Av. 137 15s 9d	224	224
London and Greenwich	Av. 127 15s 4d	10	104
London and South Western	Av. 41 16s 10d	76	77
London and York—50f shares	24	44	44
London and Windsor—25f shares	1	—	—
London, Warwick, and Kidderminster—50f shares	24	—	24
London, Salisbury, and Yeovil—50f shares	24	—	24
London, Salisbury, and Coleraine—50f shares	24	6	54
London, Salisbury, and Enniskillen—50f shares	24	—	—
Lynn and Ely—25f shares	5	—	7
Lynn and Dereham—25f shares	5	—	6
Manchester and Leeds—100f shares	76	131	136
Manchester and Birmingham—40f shares	40	77	77
Ditto ¼ shares—10f shares	4	12	12
Manchester, Buxton, and Matlock—20f shares	42½	44	44
Manchester and Southampton	2	34	34
Midland	Stock	154	152
Ditto Birmingham and Derby	Stock	112	123
Midland Great Western (Irish)—50f shares	24	—	—
Ditto Extension to Sligo	24	—	—
Newcastle and Berwick—25f shares	5	144	20
Newcastle and Carlisle—20f shares	100	—	—
Newcastle and Darlington Junction—25f shares	24	60	69
Ditto New (Brandling)—25f shares	15	51½	53
Newport and Abergavenny	24	—	—
Newry and Enniskillen—50f shares	24	—	3
Newark, Sheffield, and Boston—25f shares	24	24	—
North British—25f shares	15	204	244
North Devon	9	—	14
Northern and Eastern—50f shares	45	—	66
North Kent and Direct Dover—50f shares	24	31	34
North Staffordshire—20f shares	42½	64	64
North Wales—25f shares	24	34	4
Norwich and Brandon—20f shares	14	24	244
Northingham, Banbury, and Cheltenham	2	—	3
Nottingham and Boston—20f shares	14	14	24
Nottingham, Erewash Valley, and Manchester	14	—	—
Oxford, Worcester, and Wolverhampton	124	14	162
Oxford, Gosport, Portsmouth, and Southampton—20f shares	42½	—	—
Portsmouth Direct—50f shares	24	—	44
Preston and Wyre—50f shares	50	33	33
Richmond—20f shares	5	14	144
Rugby and Huntingdon—20f shares	2	—	2
Scottish Central—25f shares	74	144	154
Scottish Midland—25f shares	5	61	63
Sheffield and Lincoln—25f shares	14	—	—
Sheffield and Manchester—100f shares	100	—	—
Shrewsbury, Wolverhampton, Dudley, & Birm.—50f shares	24	—	—
Shrewsbury, Hereford, and North Wales	24	—	—
Shrewsbury and Birmingham	24	44	54
Somersetshire Midland	24	—	24
South Devon—50f shares	24	29	—
South Eastern and Dover	Av. 33 2s 4d	33	394
South Midland—20f shares	24	54	54
South Wales—50f shares	24	34	44
Staffordshire and Shropshire—50f shares	24	—	—
Staines and Richmond—20f shares	1	18	24
Trent Valley—20f shares	2	18	29
Trent Valley and Holyhead Junction—20f shares	14	14	—
Warwick and Cheltenham—20f shares	14	—	14
Warrington and Kilkenny—20f shares	24	—	—
Welsh Midland	24	2	3
Wexford and Carlow	24	—	—
Wilts, Somerset, and Weymouth—50f shares	24	3	44
Worcester, Shrewsbury, and Crewe Union	14	—	—
Yarmouth and Norwich—20f shares	24	—	28
York and Great Northern—20f shares	24	34	34
York and North Midland—50f shares	50	107½	—
Ditto Scarborough Branch—25f shares	25	54	54½
Ditto Selby—50f shares	20	76	79
Ditto Extension—25f shares	5	30	36

PRICES OF MINING SHARES.

BRITISH MINES.				BRITISH MINES—continued.			
Shares.	Company.	Paid.	Price.	Shares.	Company.	Paid.	Price.
235	Andrew and Sangley	24	75	126	Trevelyan	10	300
4000	Bedford	24	50	96	Trevelyan	10	300
100	Bellack	175	400	126	Trevelyan	102	80
10000	British Iron, New, Regis.	10	22	256	Trevelyan	61	170
—	—	—	—	120	Trevelyan	61	230
8000	Blancavon	50	40 2	5000	Trevelyan	6	34
120	Brewer	—	40	9600	Trevelyan	3	64
126	Buckley	—	45	6000	Trevelyan	7	14
100	Burk Cwmertin	20	200	126	Trevelyan	12	254
100	Burk Cwmertin	22	250	1024	Trevelyan	52	2
350	Birch Tor Tin Mine	104	14	256	Trevelyan	52	2
5000	Can. Trevelyan	3	1	4000	United Hills	5	48
126	Cochran	20	200	100	United Mines	300	900
114	Charlestown	—	240	6000	Wicklow Copper	5	164
3200	Caribbean Lead Co.	3	1	112	West Fowey Consols	40	35
126	Comfort	—	25	384	Wheal Franco	22	55
2560	Cook's Kitchen	—	8	127	Wheal Virgin	—	20
1000	Corn Brea	15	120	256	Wheal Virgin	40	375
1000	Callington	18	20	3845	West Wheal Jewel	104	3
256	Callington Wh. Hooper	9	10	—	West Kewick Consols	—	34
256	Callington Wh. Hooper	45	70	120	West Trevelyan	5	40
256	Callington Copper Mine	44	6	126	Wheal Rose	40	20
256	Callington Mines	44	36	256	Wheal Tolgus	164	16
256	Callington United	19	20	1000	Wheal Harriet	—	24
126	Creag Braw	120	80	126	Wheal Penrose	—	5
1900	Combarnett	54	8	126	Wheal Providence	4	—
240	Cradock Moor	3	45	68	Wheal Clifford	—	500
126	Condarrow	10	30	256	Wheal Albert	10	12
1000	Corn Bottom	1	30	126	Wheal Albert	10	12
1024	Devon & Courtney Con.	1	10	126	Wheal Acland	13	14
166	Dolcoath	—	80	256	Wheal Sisters	224	73
1000	Durham	2	5	900	Wheal Seton	130	575
10000	Durham County Coal	45	5	900	Wheal Seton	—	38
126	East Pool	5	50	126	Wheal Henry	—	104
94	East Wheal Crofty	—	1500	110	Wheal Hope (Zemur)	14	18
126	East Wheal Rose	50	450	256	Wheal Hope	7	44
—	—	—	—	1000	Wheal Martha Consols	3	3
256	East Wheal Albert	2	10	430	Wheal Trevelyan	15	240
9000	East Famar Consols	1	34	256	Wheal Mary Ann	—	40
126	East Wheal Seton	24	15	256	Wheal Norris	9	124
512	Fowey Consols	—	80	256	Wheal Trevelyan	4	—
244	Grambler & St. Aubyn	—	50	256	Wheal Trevelyan	—	10
1000	Great Consols	1000	400	107	Wheal Trevelyan	10	5
1000	Golofin	—	35	126	Wheal Catherine	54	16
256	Gomona	30	120	256	Wheal Trevelyan	—	74
20000	Galvanised Iron Co.	10	114	256	Wheal Robins	13	5
100	Glenview	5	20	256	Wheal Trevelyan	24	5
1000	Gunnis Lake	24	3	256	Wheal Trevelyan	24	5
126	Gover	23	200	126	Wheal St. Clear	214	50
10000	Hibernian	124	1	126	Wheal Reeth	1	60
1000	Holmbush	14	22	256	Wheal Gill	174	18
126	Holmbush	—	50	126	Wheal Gill	174	18
1000	Hanson	5	3	1024	Wheal Mary (Calstock)	2	3
800	Hawknor	3	6	256	Wheal Mary	4	5
1000	Harrowbarrow Old Mine	24	24	256	Wheal Concord	14	10
256	Herdston	—	16	256	Wheal Concord	14	10
—	—	—	—	256	Wheal Concord	14	10
160	Levant	—	150	126	Wheal Prospect	4	9
126	Levanth & Penstruthal	—	150	256	Wheal Victoria	2	6
1000	Lewis	5	6	240	Wheal Victoria	3	3
126	Ludcott	3	3	1024	Wheal Maria	1	700
2046	Lamerhoe Wh. Maria	54	9	256	Wheal Fortescue	13	21
20000	Mining Co. of Ireland	7	12	2560	West Wh. Maria	—	4
2800	Marke Valley	10	44	126	Wheal Pollard	5	20
200	Narrowfoot Consols	104	3	512	Wheal Sarah	—	20
70	North Roskear	—	630	256	Wheal Sarah	24	5
200	North Holmbush	—	15	256	Wheal Sarah	24	5
100	North United	41	45	256	Wheal Sarah	24	5
256	North Wheal Rose	224	50	256	Wheal Sarah	24	5
256	North Trevelyan	24	10	126	Wheal Trevelyan	19	25
100	North Pool	11	45	256	Wheal Trevelyan	19	25
15000	Northern Coal Co.	23	2	1024	Wheal Walter	2	—
126	North Wh. Providence	24	10	5000	Altan Mining Company	144	1
1000	Nant-Ar-Nells	—	10	15000	Asturian Mining Co.	5	34
600	Old Delamole Slate Co.	25	45	10000	Anglo-Mexican Co.	100	3
126	Par Consols	—	500	3374	Ditto Subscription	25	4
256	Penhalvor Moor	15	5	2000	Bolinas	150	4
126	Pen-y-Cefn Mine	50	55	12000	Ditto Scrip	15	44
100	Penrhyn	30	65	10000	Brazilian Imperial	21	44
512	Plymouth Wh. Yeoland	12	34	10000	Caba Branca (Braz. Co.)	61	—
10000	Rhymney Iron	50	33 4	12000	Cobre Copper Co.	40	194
256	Rose Consols	10	7	8500	Colombian Co. Regis.	55	44
1000	Rose Hill	1	24	8500	Colombian Co. Regis.	55	44
1024	Rosebank	24	4	8500	Colombian Co. Regis.	55	44
2500	Silver Valley	2	2	10000	Coyano Mining Co.	14	14
800	South Towan	10	13	20000	General Mining Ass'n.	20	11
1000	Stray Park	43	17	5051	Mexican Company	59	6
126	South Wheal Basset	—	2374	12000	Mocaba & Co.	25	44
126	South Caradon	5	450	29320	R. del Monte, Regis.	284	34
124	South Wh. Francis	—	40	—	Ditto unregistered	—	4
256	St. Austell Consols	6	45	—	Ditto Red Delventures	—	17
256	South Wheal Rose	2	3	—	Ditto Black ditto	—	17
126	South Yeoland	114	15	—	Ditto Loan Notes	150	117
260	South St. George	91	14	7000	Royal Santiago	10	134
256	South Trevelyan	43	13	2000	Pachuca Mines	3	3
256	Sourton Consols	4	5	11000	St. John del Rey	15	5
120	Trevelyan	5	100	43174	United Mexican	284	4

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Length.	Present actual cost.	Last Div.	Traffic Returns.	1845	1846
Arbroath and Forfar	15	£140,782	24 p.c.	168	0	£16
Chester and Birkenhead	15	530,640	24	629	18	0
Dublin and Drogheda	32	621,258	4	673	14	811
Dublin and Kingstown	32	349,736	9	673	14	811
Dundee and Arbroath	17	153,598	4	232	8	214
Durham and Sunderland	19	302,118	2	537	10	617
E. Counties & North & East.	1244	4,090,328	5	7424	6	4305
Edinburgh and Glasgow	46	1,686,296	6	2372	8	2135
Glasgow, Paisley, and Ayr	51	1,104,773	6	1718	7	1358
Glasgow, Paisley, & Greenock	23	806,134	2	2681	6	677
Grand Junction Company	98	2,397,817	10	31513	13	15797
Graveland and Rochester	45	1,296,196	6	161	0	3542
Great North of England	220	7,717,043	8	17719	0	14738
Great Western	220	7,717,043	8	17719	0	14738
Hartlepool	—	—	—	845	6	—
London and Birmingham	176	6,997,065	10	34513	13	15797
London and Blackwall	4	1,078,851	14	681	9	614
London and Brighton	56	2,653,673	4	3911	6	7136
London and Croydon	10	842,592	34	1384	2	952
London and South-Western	93	2,620,724	9	5740	9	5464
Manchester and Birmingham	51	3,972,869	8	5296	9	5712
Manchester & Leeds	10	805,568	54	867	0	762
Manchester, Bolton, & Bury	179	6,284,631	6	16058	17	9160
Newcastle and Carlisle	61	1,137,385	5	1490	5	1338
Newcastle and Darlington	224	1,156,379	8	2280	14	956
Newcastle and North Shields	7	316,869	5	433	0	337
Norfolk	—	—	—	1253	18	246
North Union, Bolton &c.	32	1,060,551	64	1521	0	1542
Presston and Wigan	22	432,014	2	404	0	300
Sheffield and Manchester	19	1,313,225	5	1428	9	4
South-Eastern and Dover	88	4,284,924	34	5522	12	4048
Taff Vale	30	611,073	34	923	0	720
Ulster	25	358,353	5	—	—	654
Yarmouth and Norwich	204	250,037	5	—	—	—
York and North Midland	53	1,279,951	10	5708	0	1956
Paris and Orleans	82	2,082,916	9	3788	0	4297
Paris and Rouen	84	1,995,306	9	4626	0	3929

COAL MARKET, LONDON.

MONDAY.—Price of coals per ton at the close of the market:—Adair's Main 15—Carr's Hartley 16 6—Davison's West Hartley 16 6—Hastings' Hartley 16 6—Hedley's Hartley 14 6—Hollywell Main 16 6—Morrison's Hartley 13 6—New Tanfield 13 6—Ord's Redheugh 14—Havensworth's West Hartley 16—Taylor's West Hartley 15 3—West Hartley 16 6—Wall's End Gibson 16 6—East Hutton 16 6—Hawthorn 16 6—Hutton 18—Lambton 17 3—Russell's Hutton 17 3—Stewart's Hutton 16 6—Whitwell 16 6—Caradoc 17—Adelaide Tees 17 6—Tees Hutton 16—West Tees 15 9—Cowpen Hartley 16 6—Derwentwater Hartley 14—Morgue's Stone 24—Sidney's Hartley 16 6—Wigan Cannell, 42—Adelaide 17 3—Ships arrived, 9.

WEDNESDAY.—Buddle's West Hartley 16 6—Davison's West Hartley 16 6—Hollywell Main 16 6—Morrison's Hartley 13 6—Nelson's West Hartley 16 6—Ord's Redheugh 14—Havensworth's West Hartley 16—Taylor's West Hartley 15 3—West Hartley 16 6—Eden Main 16 6—Cannel 42—Derwentwater Hartley 14 3—Greenwich Hospital 14—Wall's End Cannel 15—Gosforth 16 9—Hotspur 16—Killingworth 16 3—Bradley's Hutton 17 9—East Hutton 16 6—Hutton 17 3—Russell's Hutton 17 3—Hartlepool 17 9—Kelso 17 6—Thornley 16 6—Eden Hartlepool 16—Whitworth 16.

FRIDAY.—Buddle's West Hartley 16 6—Hollywell Main 16 6—Old Ponton 13—Ord's Redheugh 14—Taylor's West Hartley 16—West Hartley 16—Derwentwater Hartley 14 3—Wall's End Cannel 15 6—Hilda 16 6—Killingworth 16 3—Bradley's Hutton 17 9—East Hutton 16 6—Hawthorn 16 6—Hutton 17 3—Lambton 17 3—Lambton 16 6—Stewart's 17 9—Hough Hall 17—Kelso 17 9—Eden Hartlepool 15 6—Mackinn's Tees 16—West Tees 16—Whitworth 15 6.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—Silver bars to Hamburg, &c. 60,000 ounces.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Dec. 27, was 25,009; amount of money, £104 4s. 1d.—(Last year, 119,000 passengers, £104 4s. 1d.)

COPPER ORES.

Sampled Dec. 17, and sold at Andrew's Hotel, Redruth, Jan. 1, 1846.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Consolidated	99	£7 0	East Wh. Crofty	66	£5 6
North Roskear	88	6 10	Longloose	28	6 6
ditto	82	9 13	South Roskear	107	1 13
ditto	80	6 7 6	ditto	48	6 1 6
ditto	73	5 14 0	Wh. Chance	110	6 16 0
ditto	71	4 13 6	South Wh. Basset	100	4 6 6
ditto	58	5 9 6	ditto	55	8 2 0
ditto	52	4 9 6	ditto	36	5 19 0
ditto	44	5 14 0	ditto	29	6 12 0
North Roskear	125	6 9 6	Wheal Harriet	68	5 10 0
ditto	112	5 12 6	ditto	62	4 19 0
ditto	86	6 0 0	ditto	60	3 10 0
ditto	75	6 4 6	Dolcoath	78	1 12 0
ditto	72	7 8 6	ditto	54	5 11 0
ditto	68	5 5 6	Creag Braw	48	4 17 0
ditto	66	5 13 6	ditto	42	4 17 0
Fowey Consols	107	5 4 6	ditto	25	4 1 0
ditto	97	5 2 0	Wheal Clifford	57	8 5 0
ditto	71	3 12 6	ditto	29	4 14 6
ditto	67	2 0 0	ditto	10	4 2 0
ditto	48	4 5 6	North Pool	90	2 6 0
Hallenbeagle	94	3 16 6	Trevelyan	47	4 10 6
ditto	88	1 12 0	South Wh. Francis	23	3 10 0
ditto	74	3 16 0	ditto	12	10 2 6
ditto	66	1 17 6	ditto	4	1 10 6
East Wheal Crofty	125	6 5 6	Martin's Ore	15	2 2 0
ditto	76	4 13 0			

TOTAL PRODUCE.

Consolidated	680	£4444 9 0	Wheal Harriet	190	£890 18 0
North Roskear	604	2498 14 0	Dolcoath	181	564 3 0
Fowey Consols	390	1650 7 0	Green Baws	115	648 3 0
Hallenbeagle	316	894 1 0	Wheal Clifford	96	648 5 6
East Wheal Crofty	295	1666 6 6	North Pool	90	207 0 0
Longlose	277	1666 6 6	Trestle	47	212 13 0
South Roskear	265	1218 16 0	South Wheal Francis	39	208 2 0
Wh. Chance	265	1218 16 0	Martin's Ore	15	31 10 0
South Wheal Bassett	220	1283 12 0			

Worcestershire, and Shropshire districts, are mostly of the same opinion; and it appears evident that, as trade becomes more brisk with the advance of spring, prices will rise. A dissolution of Parliament, at the present moment, would, doubtless, have had an injurious effect on the iron trade, as it is highly probable that even those railway companies who succeeded in conforming with the Standing Orders, would, probably, have been prevented, until another session, from obtaining their acts; and this delay would not only have been most disastrous to the holders of scrip, and the parties immediately interested, but must have had a corresponding effect on the iron trade, as it is the expected increased demand, at the close of the business of the railway committees in the next session, which has, in a great measure, kept up the prices, and given the stimulus which has existed through the winter. In Wales, particularly in the neighbourhood of Swansea, the trade is exceedingly brisk—the several establishments are in full activity, and the Millbrook Company have just completed another blast-furnace at Llan-dore, which was brought into operation on Saturday week. The past six months has been productive of the best results to the operatives in the iron districts, and there is every appearance of a continuation of such state of affairs.

We do not know very intimately what may be the opinions of the public of Cornwall, as to the several projects which are before them, for a central railway; but circumstances having lately called our attention to this subject, we purpose telling them, as concisely as we can, what, after examination, is our view of the relative merits of the two lines, which are rival candidates for the central honours of the county. A principal object of a trunk line, in this instance, is the connection of the great packet port of Falmouth, by the directest practicable route, with the city of Exeter—the combining point for all lines ascending out of the narrow west of England. Two lines are before the public for the accomplishment of this object—namely, the Devon and Cornwall Central, and the Great Western and Falmouth Junction line; the first of these projects is in length 103 measured miles, from Falmouth to Exeter; and the second, to its eastern terminus at Hatherleigh, in Devonshire, at which point it smoothly incorporates with the descending line from Crediton, and passes on to Exeter, arrives there, after a run of 97 miles, from Falmouth. The estimated cost of this line is 1,250,000*l.*, and the estimated outlay for the Devon and Cornwall line, with its branches, is 3,000,000*l.* If we were to choose between these two lines upon this data, and for these reasons only, we cannot see how we could do otherwise than select the Falmouth Junction line as the preferable one of the two. A line which is decidedly shorter, and far less costly than its competitor, must, if it is not, by comparison, deficient in the other great elements of a railway, be the superior line of the two. To those elements we invite, for a moment, the attention of our Cornish readers. The general analogy, which obtains in the course of the two lines, will render their traffic returns not very dissimilar. There will be this difference, that a line which frequently changes its levels, and is thickly sprinkled with curves and tunnels, will be less likely to attract commerce to its train, than a line less complicated with such irregularities. The case is like that of a common road, which, though it may not be at all longer as to measured distance, yet, if it is far more hilly and angular, than a road passing through the same district, and in its close vicinity, yet, surely, that road of the two, in which the acclivities are most rare, and the elbows fewest in number, and (when you meet with them) mildest, will be preferable for all trading and travelling purposes, to a road made up of these and of little else. This is the inconvenient element in the course of the Devon and Cornwall line, that will injuriously affect its traffic productiveness. Unfortunately, for this line, its character does not at all improve upon an examination of its engineering properties. The first thing that, among these, attracts our notice, is a series of 14 tunnels, whose gross total is 7890 yards; the tunnelling returned for the Falmouth Junction line is 3014 yards—leaving a long balance, against the Central line, of 4876 yards, under the head of tunnels alone. This, in every sense of the word, is a serious feature in the Central line, and is not at all lightened by the gradients, which, generally, govern its course.—In consideration of the greater length, as well as the greater cost, of the Central line, the public is entitled to countervailing advantages in some of its other elements; but the public has yet to find them. The prevailing gradients on the Devon and Cornwall line, make also, when laid together, a very noticeable feature. A length of about 34 miles is occupied by a gradient of about 1 in 90; that is, there is a gradient extending through that number of miles, of the average elevation of 1 foot in every 90 feet; it is repeatedly as heavy as 1 in 80, and, once or twice in the 34 miles, is lightened to 1 in 94. Another portion of the line, of nearly equal length with that just noticed, is filled up with a severer than 1 in 140. Compared with these statements, the Falmouth Junction line appears to us, under this head, also, to present a highly favourable contrast. It has returned, as its length of gradients, heavier than 1 in 100, 10 miles and 6 furlongs only; the prevailing elevation is about 1 in 300, 1 in 468, 1 in 685, and, here and there, a vanishing inclination of 1 in 1700. It is an ingredient, and not an unimportant one, in a railway line, that its general level should be as rarely disturbed as possible; that is, that changes of elevation, or depression in its course, should occur as seldom as the form of the ground will, by any means, admit of. It must necessarily add to the danger, as well as the inconvenience, of a line, to have the plane of motion changed suddenly and frequently—there is a somewhat remarkable frequency in the change of gradients on the Central line.

In a run of 103 miles, there is an alteration from up to down then to intermediate degrees of up and down, and then to occasional patches of transient level, interrupted suddenly by a sharp gradient 244 times—a change of the level, in fact, about three times in every mile, and some of the changes very severe. No line, it is perfectly true, can be wholly without such irregularities, nor do we quote them as a damnable defect; but a defect, and a serious one, it undoubtedly is. The Falmouth Junction line, on the other hand, presents the county with just 44 such changes, or with one in something more than every two miles throughout its run of 97. Our opinion as to objections of this class, to the engineering difficulties of any line as a whole, is, that they ought not to be considered of much account, where the line is perfect or nearly so in its other departments, or where, though imperfect, it is better than the line entering into competition with it. But where the rival lines are nearly balanced in their other advantages, the question of its engineering properties will ever be an important make-weight. Governed by this rule, we should not condemn a line on account of the difficulty and heaviness of its works. But when, to make up for these, there is no compensation, no superiority in its other relations, then the engineering difficulties would with us settle the alternative of its rejection. This is the case of the Devon and Cornwall line. We cannot see how its promoters, as honourable men, can ask Parliament to sanction their line, in the face of the exhibition of a line of far more general merit than that which they represent. However, that is a question between them and the committee. There is another, and a more important question, of which the public of Cornwall is the arbitrator—namely, whether they are willing to receive an inferior and a costly line, instead of one better in its general elements, superior in its working power, and procurable at half the expense of its rival. We purposely pass over the subject of the gauges—because, until it is ascertained by which of them Exeter is to be most closely connected with the metropolis, which of them should be

adopted for their trunk line, by the people of Cornwall, is of little importance. If, indeed, the Great Western prevail in obtaining their broad gauge line above Exeter, the Devon and Cornwall line will be damaged beyond all chance of effectual repair. But looking no further than the county at present, we have shown or suggested to our west of England friends, the reasons by which, we think, they should be guided in selecting a great junction railway for their district.

In the Journal of the 20th ult., we made some remarks on the value of the turf deposits in Ireland, and gave a few statistical details from the valuable work of Dr. Kane, *On the Industrial Resources of Ireland*. Among the many advantages which appertain to that island, either in a mineral, agricultural, or commercial point of view, there are, perhaps, none of more important consideration than these deposits; and we are glad to see that the subject is being taken up by parties, who, from the position they hold in society as scientific men, are capable of doing so much good. A work has just issued from the press, by R. MALLER, Esq., C.E., of Dublin, *On the Artificial Preparation of Turf, Independent of Season or Weather, and with Economy of Labour and Time*. In this little work, Mr. MALLER takes a thorough review of the history of the use of turf, from its earliest application to the arts, particularly metallurgy, and clearly shows to what immense advantage to the country the turf bogs of Ireland might be applied. The object of the researches of Mr. MALLER has evidently been similar to those of Mr. CHARLES WYE WILLIAMS, who, after a series of laborious experiments, succeeded in producing a prepared fuel, which, for steam-boat and general furnace purposes, is even superior to coal. Mr. MALLER has taken up the subject where it appears to have been left by others, and endeavours to correct any erroneous views which the hitherto imperfect knowledge of its various details might create; he states that both Dr. KANE and Mr. WILLIAMS have fallen into error with respect to the qualities of peat; the former in its evaporative powers for steam purposes, and the latter in recommending it for smelting iron, as being free from sulphur. Without entering into details of these errors (if such they be), we will now proceed to give the results of Mr. MALLER's own investigations—he having made a series of careful experiments, to determine the quantity of water contained in dense black, and light red turf when air dried, the loss of weight and bulk in kiln drying, amount of hygrometric moisture regained by exposure to the atmosphere, and the amount of ashes contained in each soil. The black turf, which weighed before drying 33 lbs. per cubic foot, when thoroughly dry weighed only 28 lbs., losing 34 per cent.; the red was reduced from 17½ lbs. to 14 lbs., losing 19 per cent.; both sorts were then left exposed to the air, under a roof, for several weeks, when the black had regained 3 lbs. of moisture per cubic foot, or above 7 per cent., and the red only four-fifths of a pound, or 4½ per cent.—the black thus re-absorbing about one-fifth, and the red one-fourth, of what they had lost respectively. By kiln-drying, the black turf shrinks about one-third of its volume—the red about one-half; black turf produces, when burnt, 5½ per cent. of fawn-coloured ashes, containing ¼ per cent. of the weight of the turf itself of sulphur; the red only 1·13 per cent. of ashes, containing sulphur, as sulphates, 0·107 per cent. of the weight of the turf. From these experiments, he concludes that the artificial drying of turf is attended with important advantages; that this method increases the value double; that it is not only applicable to turf for immediate use, but to that to be stacked, or stored for future use; and that the assumed advantages in the red or upper turf, for certain manufacturing uses, are not founded in fact, as its ashes, as well as those of the denser black turf, contain a considerable portion of sulphur. There appears to be a vast difference in the quality of turf, from the manner in which it is taken from the bog; the best method being, to make "hand turf," as it is termed—viz., instead of cutting it out in sods, to work it up like mortar, and thus break the fibre, and mould it into bricks, which adds materially to its density and general quality. We have not sufficient space to follow Mr. MALLER through the whole process which he describes, his plans for air and kiln-drying, &c.; but when we state that the calculated quantity of turf in Ireland, if dried, would amount to the enormous sum of 6½ billions of tons, equivalent in combustible power to 470 millions of tons of coal, worth, at 12s. per ton, above 280 millions sterling—we shall not be considered as overrating the subject, when we say it is one of the very first importance to the landowners of Ireland, and to capitalists, as the manufacture of the article in question most undoubtedly opens a wide field for profitable investment, and for adding materially to the comfort and well-being of the agricultural population.

Mr. JOHN CLARSON has also called attention to this subject; he states, that the price of coals in Dublin has increased full 50 per cent. since last year, which is caused by the enormous amount required for the make of iron, and for locomotive power in all directions, increased wages to the colliers, exportation to foreign countries, and, as regards Dublin, contrary winds: the price is now 19s., for what last year sold for 12s.—If such result is to be attributed to the cause assigned, it is a serious increase; but the writer now turns to the bright side of the picture, he says, "We have the entire remedy in our hands, if we are but faithful and diligent. The native fuel of Ireland, under the judicious application of capital and skill, can make us more than indifferent as to the price of the sea-borne coal. It has been stated, that from 350,000*l.* to 400,000*l.* each year goes out of Dublin alone for coals, and when it is known, that seven large concerns consume an average of 20,000 tons each, this is most probable; and when it is further considered, that fully one-half of this sum, say 200,000*l.*, could with great advantage be laid out in employment every year, connected with our turf bogs, is it not wonderful that capital—aye, and Irish capital too—will be driven into doubtful channels, at great risk, when here is a simple matter, capable of demonstration, presenting the advantages of certain return for investment, almost unlimited, and permanent employment, with the great result of cheap fuel." Ireland has two canals running from Dublin through 2,000,000 acres of turf bog; short lines from these, running into the bog, would be the means of making an ample return for the capital, and give remunerative employment to the poor. He mentions a distillery company, who, by the judicious management of a bog, had their steam power for half the cost it would have been for coals, and were at the same time making an estate of reclaimed land for themselves. Turf is essentially the fuel of the poorer classes, and far more valuable to them than coal; while, from the present miserable system of preparation, it is three times as dear to them, as it would be under better regulations. We are, however, now entering on a new state of things, science and railway enterprise now go hand-in-hand, and with so enormous an amount of a valuable fuel at command, it is not improbable that turf may ultimately become an article of large export.

We call the attention of our readers to the series of papers we have given, from time to time, on the official returns made by the Minister of Public Works, and the General Administration of the Mines in France—as shewing the interest the French Government is taking in the improvement of her metallurgic and mineral resources. In the making of cast metal, there has been an improvement, within the last 21 years, of 2,250,220 cwt.; in large, or bar, iron, 1,667,554 cwt.; employing upwards of 50,000 workmen in its preparation. The making of steel has greatly improved, and increased also, within the last few years; but, notwithstanding all the exertions that are making by the manufacturers of both those important metals, and the encouragement given by Government, and

the different Chambers of Commerce throughout the country, the quantity produced by the various forges and furnaces is far from being sufficient to meet the increasing demand that is making for iron and steel, in consequence of the rapid progress in railways and machinery of every description. They will, therefore, for some years to come, be obliged to import annually to a large amount from this country, Belgium, Germany, and Sweden, of both these materials, to meet the demand. The question of free importation of foreign iron, or at a very reduced duty, for the purpose of ship-building in the different ports of France, will soon be decided by the Legislature, as the Ministers of Commerce and Marine feel convinced that, if one or the other is not adopted, it will be impossible to improve the French navy by the building of iron steamers, so as to keep in some proportionate degree with the advancement making in the British naval construction, if they have entirely to rely upon the iron forges of France for their cast metal and wrought iron. The yield of the copper mines has decreased since 1816, from 1642 cwt. to only 310, being the quantity obtained in 1843; but in 1844, and last year, it has not approached even that figure,—as very little of this ore is to be found in the country, and they import it either from Chili or Cuba. Some mining adventurers do, however, expect that, in a few years hence, France will be able to import a large quantity from her African possessions of Algeria, several copper mines having been discovered. Although there is the above decrease in copper ore, that of silver has increased in the same period from 500 cwt. to 2,500; lead and litharge, by 6,694 cwt.; and sulphurated antimony, regulus, &c., by 27,720 cwt. The working of the coal basins of the Loire, St. Etienne, Rive de Gier, and Northern Department, has been carried on, within the last few years, with more spirit and enterprise—as the demand making both for mineral and vegetable fuel has increased in the same proportion, as that of the making of iron, and the introduction of steam machinery in all the large manufacturing towns throughout the kingdom, as well as that of steam navigation, has given an impetus to this branch of industry, that had, till within the last ten or fifteen years, been nearly neglected. Notwithstanding that France possesses some very extensive coal mines, it is generally speaking of a very inferior quality, not to be compared with that of Newcastle, Durham, Sunderland, Staffordshire, Wales, and Ireland: consequently, where good strong coal is required, whether by Government or private individuals, it is to the mines of this country they resort for their supplies, *malgré eux*; and a considerable quantity is imported annually from Newcastle and other parts of the United Kingdom, not only greatly increasing the coal mining industry of the north, but at the same time the British shipping interest. It is the scarcity and dearth of fuel, whether coal or wood, in France, and the enormous expense of carriage, that are the chief drawbacks to mining generally, and great speculations. The working of the mines, is however improving; and the introduction of railways from one end of the country to the other may, in a few years hence, work wonders.

In the Journal of last week we remarked, at some length, on the illiberality of the Duchy of Cornwall, in the manner of granting the mining setts, in the hands of that body. Not only have they attempted to impose most unreasonable dues; but a system is now being attempted to be introduced, which strikes at the very root of the principles hitherto acted upon, that of giving every encouragement to mining adventure; we mean, the securing, in addition to the dues agreed upon, a per centage upon the profit obtained. When we penned those remarks, we did not think we should so soon have to follow them up, with reference to the north, but we are sorry to find, that in Scotland that grasping spirit exists, which we have deprecated in Cornwall; it is true, this may partake of something like a national feeling, and yet we should have thought our *canny* friends in the north had been too wise, not to encourage, by low dues, mining adventure, which must tell equally well with the owner of the soil, as with the speculator. The stewardry of Kirkcudbright has lately been subjected to a rigid geological investigation by several highly respectable gentlemen from Cornwall, who have discovered a considerable number of lodes, and several cross-courses, which have a favourable appearance; the only drawback, to a spirited and probably successful issue, being the high dues which are demanded by the owners. This is much to be regretted, as it is quite evident that proprietors of mineral lands, by standing out for high dues, injure not only their prospects of realising a portion of the wealth extracted, but prevent the improvement of their waste lands, the formation of roads, and the employment of the labouring population of the district, and a considerable extent of trade to the surrounding neighbourhood. Most of the lodes hitherto discovered are in the barren and uncultivated hills and wastes of the stewardry, where no roads have yet been made, and where all is in a state of natural wildness; if, under such circumstances, dues were moderate, a spirit of enterprise would be engendered, which would tend greatly to the improvement of the estates, add materially to the income of the proprietor himself, and largely benefit the whole community. The mineral resources of this part of Scotland, which are considered by scientific men to be of considerable promise, have been much neglected; but now that the spirit of mining adventure is abroad, and companies, having both skill and capital, are willing to risk the latter, for the purpose of raising the hidden mineral, it is perfect infatuation in the proprietors of the stewardry to place a stumbling-block in the way, in the shape of heavy dues, instead of giving them every encouragement, and meeting them in that spirit of liberality, which always tends as much to their own interest, as to that of the adventurer and the public at large.

The Act of Parliament, for the Regulation of the City Dues on Coals, of 1 and 2 Vic., c. 101, expired on Wednesday last, and that of 8 and 9 Vic., c. 101, came into operation. This Act has been carefully revised and amended, and by it duties are extended to coals borne by railway; it also levies a duty of 1*d.* per ton, for the purpose of providing a fund for the opening of poor and densely-populated districts in the metropolis, and for keeping open spaces in the vicinity of the same, as a means of promoting public convenience, recreation, and health; or, in a word, for the metropolitan improvements, in progress and contemplated. With respect to the regulation of vessels laden with coal, entering the port of London, the corporation are empowered to make bye-laws, in such manner as not to interfere with the general working of the Act. Relating to the coal trade with Sicily, an important document has been transmitted by the Lords of the Treasury to the Customs department, in consequence of claims made by certain parties for return of duties on coal exported in Neapolitan vessels, and it is of considerable importance to the trade that this document should be well understood. It appears that, by a treaty with the Sicilian Government, of the 25th June last, it was agreed that no higher duties should be charged upon goods exported from either country, in vessels of the other, than were charged upon like goods exported in national vessels; the Commissioners of Customs refused the application of parties, who had been charged in error, to make any return of duties thus erroneously levied, without the concurrence of the shipowners, who, being foreigners, such proceeding would be attended with great trouble and expense. As a general rule, the committee of Privy Council of Trade recommend to the Lords of the Treasury, to adhere to this decision of the Customs, but, in the cases in question, they consider the consent of the shipowner may be dispensed with, on the supposition, that the parties in each case were not aware, at

the period of their agreement, of the intended abolition of the differential duties on goods exported in Neapolitan vessels, as if they were so aware, it is clear there could be no ground for making the return of the duties dependent on the concurrence of the shipowner; more particularly, as the shipowner obtained for his freight as much as he was entitled to receive at the time when he concluded his agreement with the coalowner.

The excitement which has pervaded the public mind for the past couple of months, as regards railway projects, may be considered to have attained its height. Of the numerous lines which have complied with the stipulations, so far as depositing with the Board of Trade their plans and sections, we must confess, if but one-eighth of the number carry their bills through Parliament in the ensuing session, we think they may consider themselves fortunate in so doing. Now, assuming that such number, not exceeding one hundred of the projected undertakings, be attended with success, what are we to say to eight times that number, who have subjected themselves to the cost of surveys, of parliamentary notices, lawyers' charges, and sundry other expenses, and to the deposits on the shares which we have a right to assume have been paid, if not wholly, at least in part; while the remaining five or six hundred companies which have been announced, we may pass by as of little moment. If, however, we are right in assuming that not more than 100, or we should even say eighty, companies, will obtain the acts applied for in the present session, it becomes a question of some little importance to those who may be either applicants for, or holders of, shares, to consider how far their liability extends, and whether any call can be made on the former, or what will be the return on the deposits paid by the latter. This leads us to offer a passing remark on the opinions expressed by several of our contemporaries, and the arguments emanating from the legal profession. We are not surprised as regards the opinions of the several counsel who have been consulted on the points submitted to them—merely a, b, c, questions—that a difference of opinion should exist, for it would be absurd to suppose for a moment that lawyers should agree—indeed, was such the case, well might we say, "Othello's occupation's gone;" for it is only now that those in the legal profession, who have not heretofore associated themselves with the projects of the day, will come in for their participation in the legal spoil. We can very well imagine the pretty play which, during the next two or three terms, the lawyers will have in prosecuting claims, and endeavouring to shirk responsibilities. Lawyers must, of course, be paid their bills—no matter what the result of the project; engineers must be paid—no matter what the rate of pay, or whether the work be executed or not; officials require remuneration, and many heavy expenses are in many instances necessarily incurred—while others, perhaps of equal amount, should be expunged. No matter; in most instances, it will be found that the preliminary expenses amount to rather a serious figure, ranging from 5000*l.* up to 35,000*l.*, in each of the respective companies. We will, however, take the expenses as averaging 9000*l.*, and we will assume that 500 companies have been subjected to an expenditure to such amount. This would give a total of 4,500,000*l.* Now, if we add to this, 300 companies, with an expenditure of 3000*l.*, we have 900,000*l.* in addition thereto—making together 5,400,000*l.*; thus leaving out of our calculation some other 300 or 400 projects. If, then, it should appear that of the 800 companies, the capital expended in the preliminary operations of which we have set down at 5,400,000*l.*, it is clear that one-tenth only—that is to say, if we are right as to the number of companies, who will obtain their acts this session—will render profitable the amount thus expended, or 540,000*l.*; thus leaving a sum of no less than 4,860,000*l.* to be paid by the projectors, or holders of shares, in the several undertakings which may not arrive at a successful issue,—and this, be it remembered, having reference only to the amount expended up to this date.

The subject, under consideration, is one of the first moment, inasmuch, that the question naturally arises, from whence is the money to come, to meet the demands, which may be expected to fall thick and three-fold, upon one party or the other connected with the several projects, and hence the question—with whom does the responsibility lie? We will assume, for a moment, that of the 720 companies, which are thus subjected to a loss of 4,860,000*l.*, the number of shares into which they are divided, may be taken at 28,800,000; if of this number we say that 8,800,000 have been issued, and on which 3,000,000 have been paid upon, and taking an average of 1*l.* 10*s.* per share, as deposit, we should have 4,500,000*l.* paid upon the several projects, to which we have referred, having no reference to those which may obtain their Acts in the ensuing session. Now, to pay the sum of 4,860,000*l.*, the amount calculated as the expenses incurred, this would give something like a deduction, on the average, of 3*s.* 3*d.* per share; true it is, that, in some cases, it may be found to approach nearer to three times that sum, while, in others, it may, and ought not to, exceed one-third that which we have named. However, it is sufficient with us, that the conclusion, at which we have arrived, is a pretty correct approximation to the aggregate. We now arrive at the vital point, as to who is the party to pay the expenses thus incurred; if our figures be correct (or, in any case, they will serve as data), it will be seen that, on the average, a deduction of 3*s.* 3*d.* per share, or, in the whole, 4,860,000*l.*, would be taken from the holders of shares. It will, however, be seen that, assuming the number of shares, as before stated, to be 3,000,000, the amount, on the average, which can be legitimately deducted, at the rate of 1*l.* 10*s.* per share, paid as deposit, would be only 1*s.* 6*d.* per share, thus leaving a deficit of no less a sum than 262,500*l.*, which would be required to be met by the projectors, or provisional committees. It must be borne in mind, that we are assuming figures, with a view of directing attention to the subject, rather than setting them forth as statistical data. Yet we feel well satisfied, that the result will prove we are not far from the mark, it being borne in mind, that the figures we have adduced apply to the aggregate or gross amount, and, therefore, do not admit of reasoning on any one, or few cases, which might form, so far as excess is concerned, an exception.

One word more, ere we close our remarks, which, in truth, were intended rather to be directed to the attention of provisional committees, than any other "section" in our "line." It is quite clear, that some few hundreds of thousands of pounds must be found to meet expenses incurred, for it is, we believe, pretty well admitted, that lawyers and engineers do not work, or we ought rather, perhaps, to say, give their time, for nothing. Members of the provisional committee, we feel, are placed in an awkward position, inasmuch, that by their names being held forth to the public, they not only induce parties to subscribe to the project; but may be said, or, at least, so we take it, would be the opinion of a jury, make themselves responsible for debts incurred by the official organs of the company; and here a very nice question of law, if not of equity, arises. We will, by way of illustration, give one case of many, which have come under our notice, and while protective associations are being formed on the part of holders of shares, we think it would be well if that the numerous members of provisional committees would assemble and arrive at an opinion—for it is not our province to recommend counsel—as to the position in which they stand, and the responsibilities they may have incurred. However, to the case in point, Mr. Smith, a gentleman of prolific ideas, being intimate with Mr. Brown, a gentleman of legal attainments, discuses over a glass of mulled port, the desirability of constructing a certain line of railway; having consulted Mr. Jones, a lawyer, possessing but few pence and practice, it was determined at once to invite Mr. Robinson to join in the proposed undertaking; we have thus here Smith, Brown, Jones, and Robinson, who, we believe, are parties well known by those who may have consulted a "London Universal." The four parties having determined upon the capital required, the number of shares into which the company should be divided, and, having fixed on the termini, invited their respective friends and parties, located in the district, to allow their names to appear as members of a provisional committee, it being, of course, understood, that such was simply for the honour of the thing. Certain others are induced to allow their names to appear, on the assurance, that they shall become working members, and, of course, be paid for the services they may render; and thus it is a provisional committee is formed, a prospectus issued, offices taken, applications received for shares, and the various little *et cetera* strictly adhered to—it not being forgotten to appoint bankers to the company.

The provisional committee, in the majority of instances, being perfectly

innocent of the nature of the "moves" in progress, take little or no active part as regards the movements of the company, but, having been convened at a meeting held on some particular occasion, they find themselves made parties to the appointment of a managing committee, not forgetting on so important an occasion that of the lawyer, the engineer, and secretary. It might be supposed that here the duties of the provisional committee would arrive at a *terminus*, but we fear, judging from the information we have already received, that these gentlemen, who so kindly volunteered their names as upholders of the several projects, will yet have occasion to invite the further assistance of the legal profession, in meeting the demands to which they may be subjected. We have merely noticed the position of the several parties, and may, perchance, next week revert to the subject, when we shall enter more into detail.

PRODUCE OF CORNISH MINES.

Table showing the Quantity of Copper Ore raised in Cornwall—Fine Copper produced—Amount in Money—Standard, Produce, and Price—for each week in the year 1845:—

Date.	Stand.	Produce.	Price.	Ore.*	Fine Copper.†	Amount.
Jan. 2.	£106 9	74	£ 5 7 6	4480	343 7	£24,227 1 0
" 9.	103 5	73	5 5 0	2997	232 13	15,777 15 0
" 23.	105 9	74	4 18 0	2842	206 8	12,951 17 0
" 30.	104 19	73	5 6 6	3877	295 1	20,444 11 0
Feb. 6.	105 9	74	5 8 6	4271	325 5	22,987 14 6
" 13.	105 15	74	4 15 6	2650	188 19	12,699 3 0
" 20.	93 16	74	6 8 0	1884	184 14	12,145 12 0
" 27.	106 14	7	4 14 6	3265	227 14	15,319 10 6
March 6.	104 9	73	5 9 6	4767	375 19	26,154 6 6
" 13.	101 6	8	5 7 0	2670	213 15	14,317 16 0
" 20.	95 1	93	6 12 6	3430	339 6	22,762 5 0
" 27.	108 15	64	4 9 0	3264	215 16	14,496 12 0
April 3.	102 1	84	5 13 6	4169	344 12	23,712 12 0
" 10.	105 9	74	4 15 6	2960	212 12	14,282 11 0
" 17.	89 10	114	7 13 0	1933	224 1	14,740 18 0
" 24.	104 9	73	4 19 0	2767	205 0	13,802 17 0
May 1.	104 10	73	5 7 0	4776	370 3	25,564 1 6
" 8.	100 8	73	5 0 6	3632	282 1	18,334 2 6
" 22.	97 0	84	5 15 0	4872	427 15	28,104 6 6
" 29.	108 18	73	5 3 0	3792	274 8	19,481 9 0
June 5.	111 0	73	5 6 0	3738	271 16	19,899 1 0
" 12.	109 9	73	5 6 6	2817	208 12	15,069 16 6
" 19.	95 12	104	7 5 6	2649	276 14	19,177 1 6
" 26.	110 6	73	5 2 0	2752	197 3	14,184 6 6
July 3.	111 19	73	5 15 6	4286	327 9	24,882 5 6
" 10.	107 18	73	5 15 0	3205	250 16	18,254 5 6
" 17.	102 7	9	6 9 0	3271	296 1	21,308 3 6
" 24.	113 13	73	5 4 0	3991	281 5	20,990 15 6
" 31.	111 6	73	5 17 6	3319	259 4	19,730 8 0
August 7.	111 14	73	5 7 0	2866	207 3	15,264 17 6
" 21.	97 13	10	7 0 0	3099	309 10	21,705 15 6
" 28.	113 5	73	5 6 6	3344	236 12	17,609 18 6
Sept. 4.	113 3	84	6 9 0	4126	334 14	26,532 8 0
" 11.	112 0	73	5 13 0	3171	238 0	17,936 1 0
" 18.	101 15	93	6 16 0	2954	276 10	20,015 18 6
" 25.	116 10	7	5 8 0	4788	336 6	26,026 4 6
October 2.	116 11	73	6 5 6	3227	252 1	20,507 17 0
" 9.	114 17	73	6 3 0	2771	215 13	17,155 3 6
" 23.	100 8	94	6 16 0	2815	267 8	19,114 15 6
" 30.	118 3	64	5 4 6	2856	191 2	14,734 4 6
Nov. 6.	113 17	73	6 1 6	4594	357 9	28,061 6 0
" 13.	109 5	73	5 14 6	2922	226 9	16,707 16 6
" 20.	97 14	94	6 13 0	2609	251 12	17,410 18 0
" 27.	107 16	73	5 9 6	4872	370 0	26,496 11 0
Dec. 4.	112 18	73	5 8 6	3990	288 9	21,592 8 0
" 11.	107 15	73	5 9 6	2626	201 3	14,455 2 0
" 18.	96 19	94	6 9 9	2149	203 9	13,819 15 6
" 24.	107 5	73	5 8 0	3495	257 1	17,968 0 6
				162,587	12,892 1	£919,938 6 0

COMPANIES BY WHOM THE ABOVE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal Company	11007	£ 62,938 6 10
English Copper Company	27425	143,010 15 3
Vivian and Sons	27813	148,650 6 3
Freeman and Co.	21286	115,832 14 9
Grenfell and Sons	21208	145,382 3 8
Sims, Williams, Neville, Druce, and Co.	20079	120,607 7 11
Williams, Foster, and Co.	33017	181,358 11 0
Crown Copper Company	752	3,157 19 6
Total	162,587	£919,938 6 0

PRODUCE OF CORNISH MINES IN THE PAST YEAR.

Name of Mine.	Produce.	Amount.
Bedford United	1187	£8037 6 6
Barrier	228	1292 3 6
Botallack	1384	10363 6 6
Carharrack	100	508 4 0
Creeg Brava	546	2902 7 0
Condurow	166	785 13 6
Camborne Vean	2751	13873 2 6
Consolidated	6754	34096 17 6
Carn Perran	158	518 1 0
Consols	3044	17049 15 6
Cook's Kitchen	502	1522 8 6
Copper House Slag	218	332 2 0
Carn Brea	667	3942 14 0
Cliff Down	9	15 15 0
Dolcoath	3504	16996 16 6
East Pool	929	5430 4 0
East Wheal Crofty	6173	36302 14 6
East Wheal Alfred	21	92 8 0
East Copper Bottom	4	21 6 0
East Downs	63	322 1 0
East Crinids	14	107 16 0
East Scion	10	107 16 0
Fowey Consols	8976	48933 0 6
Great Work	31	281 16 0
Godolphin	852	7715 5 0
Graham and St. Aubyn	1494	8201 14 6
Hallenbeagle	2879	10478 18 6
Holmbush	1887	14957 5 6
Harvey's Dross	211	314 13 0
Herland	17	107 16 0
Hansell	34	255 5 0
Llanivet Consols	1125	6081 14 6
Levant	1088	7154 19 0
Mark Valley	165	521 17 6
Martin's Ore	26	74 18 0
North Downs	306	1731 0 6
North Basset	24	123 12 0
North Roskear	6430	40555 10 6
North Tolgus	19	121 19 0
North United	12	85 4 0
Nangiles	14	22 8 0
North Pool	217	788 9 0
Old Crinids	8	44 15 0
Owen Vean	9	19 16 0
Penstruthal	405	3344 15 0
Par Consols	5449	29594 9 0
Perran St. George	1665	7323 16 6
Poldice	2485	10889 5 6
Pembroke	3	37 18 0
Providence	639	2602 2 9
Relistian	16	71 16 0
Regent Consols	2	7 3 0
Redruth Consols	48	416 0 0
South Wheal Basset	3390	19961 16 0
South Canadian	4631	27319 9 6
South Towan	2267	9652 14 6
South Wheal Francis	249	979 12 0
South Roskear	1464	6738 0 6
St. Austell Consols	37	81 8 0
Spearmoor	9	129 7 6
St. Ives Consols	43	224 4 0
Stocks Ore	2	7 14 0
Treleigh Consols	1637	9265 15 0
Tresavean	6435	32352 14 6
Trethellan	2862	11013 5 6
Trotell	658	3499 15 6
Trevisey	767	6436 18 0

* Tons (21 cwt.)

† Tons cwt.

[Carried over.]

Name of Mine.	Produce.	Amount.
Tincroft	5644	28527 10 6
Trenow Consols	3205	20365 14 0
Treaghan Consols	646	42 6 6
Trevaun Banner	14	478 16 0
Treffry Slag	14	142 2 0
Ting-Tang	100	409 10 0
United Hills	3017	13036 12 6
United Mines	14374	74908 1 6
Vivian's Ore	4	66 8 0
West Canadian	4467	33723 1 0
Wheal Jewel	1476	7823 17 0
Wheal Maria	1288	10071 15 0
West Trethellan	289	1067 14 0
Wheal Gortland	366	1658 8 6
Wheal Henry	148	750 6 6
Williams's East Downs	179	838 17 0
Wheal Anna	215	822 16 0
Wheal Ellen	714	4373 0 6
Wheal Busy	420	988 12 0
Wheal Penrose	24	157 4 0
Wheal Plenty	4	15 0 0
Wheal Weath	4	21 2 0
Wheal Brook	3	8 8 0
Wheal Curtis	9	18 18 0
Wheal St. Andrew	323	708 11 0
Wheal Andrew	192	971 4 0
Wheal Trenance	1	8 7 0
West Wheal Providence	10	109 0 0
West Wheal Treasury	267	1274 7 0
Wheal Trevelth	171	1121 17 6
Wheal Bullor	907	3813 19 6
Wheal Providence	2442	13783 17 6
Wheal Trewavas	883	4855 12 0
Wheal Prosper	5105	24946 0 0
Wheal Vor	24	106 4 0
Wheal Brewer	1316	6266 7 6
Wheal Darlington	649	2397 8 6
Wheal Seton	1590	8636 0 0
Wheal Virgin	655	2964 6 0
Wheal Comfort	123	313 9 6
Wheal Alice	106	617 18 0
Wheal Hope	5	13 6 0
Wheal Unity Wood	86	53 6 0
Wheal Prudence	513	1477 4 0
Wheal Sisters	577	2955 6 0
West Fowey	119	528 3 0
West Wheal Jewel	1749	7425 8 6
Wheal Harriet	132	3000 9 0
Wheal Clifford	348	2254 0 6
Wheal Wellington	13	70 13 0
Wheal Speed	13	80 15 0
West Copper Bottom	10	57 5 0
Wheal Bolton	6	5 11 0
West Fowey Consols	50	211 5 0
Wheal Votive	10	47 15 0
Wheal Treasury	17	45 6 6
Wheal Rodney	127	458 6 6
Wheal Gill	27	139 9 0
Wheal Malden	384	1824 18 6
Wheal Vyvyan	378	1462 18 6
West Wheal Maria	22	103 19 0
West Grampian	12	67 10 6

MINING IN 1845.—No. II.

Having in our last Number adverted to several mines in Cornwall, which either are to be found in the Ticketing Paper, or our share list, we may, on the present occasion, note twelve others, the products of which have, at least, tended to encourage mining enterprise—not only as regards the quantity of ore raised, but the profitable results which have attended them, either in time past or present. Our present Number affords evidence of the extent of mining operations in the county, embracing several new mines. In addition to those already mentioned in last week's Number, we may enumerate the following—viz:

Stray Park and Camborne Vean	Tons 2751	£13,8
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4, Upper Byron-place, Dec. 11, 1845.

Sir,—I have thought once or twice to forward the memorandum taken by me for your use, if it may at any time be of value whentrying my boat, the *Water Sprite*, and I should say that this calculation could scarcely be considered a proof of the excellence of your own patent, I assure I have not an engine more than one-half the necessary power of, or of the size of the *Water Sprite*. By the common paddle on the side in a still water of our float, we were able with the same pressure of steam to effect in a quarter minutes; of course minutes, whilst with your floats we were exactly seven times the distance run was nearer two miles each time; this does not include starting in either case, as the distance run was nearer two miles each time; the time was kept from the same point to another, one mile apart both trials, and the above was the result. My engine has given her another trial since, but I was not present, though he tells me of the fully equal result. I can only assure you, your paddles must and will come into more general use, as they are more and more tested, and, with best wishes,

I am, Sir, your obedient servant,

SAMUEL BROWNLEE.

—Publisher of the *CONVEY FLEET*, 5, Granville-place, Holborn, Bristol.

CONTRACTS OF BRITISH COAL FOR THE FRENCH GOVERNMENT.—We have alluded, in former numbers of this Journal, to the contracts about to be entered into by the Minister of Marine for the delivery of British rock coal at various stations. On the 24th ult., the contracts for the following quantities of coal were concluded at the office of the Minister of Marine, for the use of the steamers on the following stations:—*South Pacific*: At the Islands of Papeiti and Taio-hae, 5,000,000 lbs. of English rock coal—more properly speaking, Newcastle. There were three tenders, as follows:—Messrs. Lauriol, of Nantes, at 13s. 3d. the 100 kilos, or 2 cwt.; Hautier sons and Decaens, of Havre, at 12s. 4d.; Faucher brothers, of Bordeaux, at 16s. 7d.; Messrs. Hautier and Co. were declared the contractors.—*Sierra Leone*: Three tenders; Messrs. Jackson, of London, offering to furnish it at 7s. 9d. the 2 cwt.; Babaut brothers, at 5s. 10d.; Messrs. Hautier and Co., at 5s. 7d.; the latter were declared the contractors.—*Port Alexander, Africa*: Two tenders; Messrs. Jackson, at 8s. 3d.; Hautier and Co., at 9s. 2d.; Messrs. Jackson were declared the contractors. The total quantity to be delivered on the coast of Africa amounts to 10,000,000 lbs.—viz., Garroway, 1,000,000 lbs.; Axim, 1,000,000 lbs.; Prince Island, 1,500,000; Bay of Bimbia, at the bottom of the Tiaffa, 1,000,000 lbs. In consequence of a reduction that has been made in the security money for the fulfilment of these contracts, by Article 2 of the *cahier des charges*, it is fixed at 840l. instead of 1560l.—to be delivered at the following periods and portions at Goree: 2,000,000 lbs. February 1846; 4,000,000, in March; and 4,000,000, in April—total, 10,000,000 lbs. The next contracts to be entered into by the Minister of Marine is to take place on the 10th instant, for the delivery of 2,000,000 lbs. of English rock coal at the Island of Martinique. It must be remembered, that Messrs. Hautier of Havre, Lauriol of Nantes, and Faucher brothers of Bordeaux, are not only extensive contractors, but shipowners; and they had sooner enter into contracts, for the supplying of Government, at the most moderate profit, rather than an Englishman should have the chance of a fair competition, so jealous are the French commercial body against British industry and enterprise, that they have formed a conclave, if possible, to import not only coal from this country, but iron and all other material, for which there may be a demand, on board their own vessels.

We understand that Mr. Wheelwright, the indefatigable manager of the South Pacific Steam Navigation Company, is about to leave this country for South America, for the purpose of making preliminary arrangements to establish a regular communication between Valparaiso, Callao, and Lima, on the South Pacific side, and in conjunction with the Royal West India Steam Mail Packet Company, on the Atlantic side, so as to afford a quick transit between this country and the mining districts of Chili, by way of the Isthmus of Panama. The exertions of this gentleman in establishing so grand an undertaking, we have no doubt will be duly appreciated by the mining and commercial interest in both countries. There is very little doubt, that during the present year, the stupendous enterprise of either cutting a ship canal across the Isthmus of Panama, or the establishing of an excellent road, should the former be found impracticable—which, however, we have no reason to doubt will be the case, as, from the plans and returns we have seen, the enterprise promises to be successful.

BAHIA STEAM NAVIGATION COMPANY.—The half-yearly general meeting of the shareholders in this company, was held at the George and Vulture Tavern, Cornhill, on Monday last, the 29th ult.—C. SAUNDERSON, Esq., in the chair.—Mr. KEARSEY (the solicitor), having read the advertisement convening the meeting, and also the minutes of the last, which were confirmed, the CHAIRMAN observed that, since the meeting in June last, the proceedings in Chancery, in the case Benson v. Heathorne, had been greatly expedited. The Vice-Chancellor had given his final directions in the case, and the only thing remaining to be settled was, the passing the bills through the Taxing Master's Office. In this proceeding there was certainly some little uncertainty; but the directors had hopes that the amount they would have to receive, would prevent any further drag on the pockets of the shareholders.—Mr. KEARSEY then read the directors' report, which, after alluding to the above stated position of the Chancery suit, detailed the present prospects of the company; the directors had grounds for expecting that their petitions for a subsidy from the Brazilian Government would eventually meet with a favourable reply, though at present they stood over for a time. There was no doubt but that considerable profit would follow good arrangements, though it was evident there was not sufficient traffic to engage a large public company; there were in Bahia many difficulties to steam navigation—the want of engineering facilities, from the absence of all manufactories, suitable for keeping machinery in repair, and the consequent expense attendant on such steam navigation—although at a future day there was no doubt it would prove successful. It was, therefore, proposed that the company should amalgamate with the Northern Brazilian Steam Navigation Company—an establishment similar to our Peninsular and Oriental Company—by which the shareholders would insure a return for their long dormant capital, and negotiations were now in progress for carrying this amalgamation into effect.—From the statement of accounts, it appeared that the total amount paid by British shareholders had been 46,440l.; Brazilian ditto, 7783l.—making a total of 54,223l. The receipts for the half-year up to the 31st of March last, had been 5512 6s. 7d., and disbursements, 2864 7d.—leaving a balance of 2654 6s., which remained in the hands of the bankers. The entire assets of the company, exclusive of sundry accounts due by the Brazilian Government, now under adjustment, amount to 17,765 6s., which includes the above balance.—The CHAIRMAN further explained, that they were in hopes of obtaining a subsidy 2000l. or 3000l. per annum, and several of the deputies had promised to support their petition; by joining the other company, they should be able to get rid of all liability in England, and there was every prospect of a successful issue.—In reply to a question from Mr. Kemp, Mr. KEARSEY said, the law costs already paid had been about 700l.; 500l. of which at least they expected would be returned. The report and accounts were unanimously adopted, and a vote of thanks having been passed to the chairman and directors, the meeting separated.

LITERARY NOTICES.

Railway Revelations: being Letters on the proposed Direct London and Manchester Railways. By THOMAS MULLOCK, late Secretary to the late Direct London and Manchester Railway Company (Remington's Line).

This pamphlet, besides an introduction, consists chiefly of the correspondence of Mr. Mullock to the *Mining Journal*, during the past two years, giving a complete history of the support given—the delays offered—and the means generally taken to get up an opposition to Remington's original line, and establish another on its ruins; the result of which has, however, been an amalgamation (or fusion, as the French have it), and a determination to go jointly to Parliament as one scheme. We give an extract from Mr. Mullock's introduction, as a specimen of his clear and pungent style, and recommend the pamphlet to the consideration of all concerned in the present critical position of railway affairs, as containing a faithful review of the proceedings of one railway company, and bearing most truthfully on many others of the rival schemes. He denounces the idea of considering a railway project merely as a gambling scheme for bulls and bears of the share market, or that Cockney capitalists may run through the rural districts of this lovely land, reckless of public objects, so long as scrip and shares can travel profitably from hand to hand among a brotherhood of brokers. He observes—"At this moment twelve hundred and old railway schemes are placed before the British public—schemes originated by professional men of every class—ostensibly supported and managed by men of all ranks—the nobility, gentry, ecclesiastics, merchants, traders of this great country—and, moreover, upheld by the deposits of innumerable shareholders—men, women, and children! To assert that patriotic motives have had any share in stirring this national impulse, would be to incur the downright ridicule of the speculators themselves. Gain, immoderate gain, is the avowed object of every meddler in railway matters, and ten per cent. dividends are the golden apple flung in the path of England's runners in the race of insatiable covetousness! It is in vain that these deluded multitudes are warned against the darling lies and crafty exaggerations of the manifold projects of this evil day; the love of lucre has so besotted their reasoning faculties that they avert themselves from all salutary admonition, and hug the deceptions which will be long crush crush communities. Nor is it merely the evil of extravagant railway speculation that has smitten so deeply the British nation; it is the frantic neglect of those profitable pursuits in which regular industry has hitherto been successful, that will inflict the sore injury upon the commercial interests of England. Gamblers will never become steady traders, men of prudence, content with small, sure, and honest profits. As well might you hope to convert a reckless buccaneer into a Thames wherryman. As for remedies, it is the proper function of the paid servants of the Crown to devise prescriptions for an ailing people. Sir Robert Peel is, or ought to be, the First State Physician, and it is to be deplored that his science was not earlier employed in checking the primary symptoms of a fearful epidemic disease which threatens to ravage a whole empire."

Railway Map of France.—The *Journal des Chemins de Fer*, one of the best of the French (or foreign) railway journals, has presented its subscribers (as a cadeau) with an elaborately executed map, giving all the established lines now in operation—those that have been conceded and adjudicated during the last session, and those that are projected during the present. It is, without exception, one of the most correct maps we have seen of France, but the great advantage is that of having all the railway lines before you. To those who are interested in railway speculations in France, we cannot do better than recommend this useful guide to their notice.

DEVELOPMENT OF THE MINERAL RESOURCES OF IRELAND.

[FROM A CORRESPONDENT.]

We last week adverted, with unmingled satisfaction, to the formation of new mining companies in Ireland, as a means of effecting a vast amount of good in that hitherto unhappy country; and we particularly dwelt upon the gratifying fact, that the Southern and Western Mining Company of Ireland are progressing far beyond their most sanguine expectations. We added, that they had succeeded in purchasing the Gurtavallig Mine, situate on the south-eastern shore of Bantry Bay; and that this mine gave promise of a profitable return to the proprietors, and every prospect of ample employment to the inhabitants of the district surrounding it. Expressing ourselves in respect to the change that such employment would produce in the condition of the peasantry within its influence, we said that "it would convert the wretched mud hovel into a comfortable cottage—the half savage inhabitant into an industrious labourer, and a sterile and unprofitable waste into wide spread fields for the operation of industry and the production of wealth." Let it not be supposed that, in thus expressing ourselves, we exaggerate either the actual condition of the peasantry of the district, or that we are too sanguine in our anticipations of the improvement that will be produced in the condition of both, by the extensive working of a richly-productive mine in the last—a district, be it noted, of which we "speak by the card," happening, in our exploratory wanderings through the south of Ireland, to have had our attention particularly directed to the extreme wretchedness of its inhabitants—to its extensive tracts of easily reclaimable bog lands in the extensive hollows and valleys between its magnificent mountains and peaks—as well as to the multitudinous metalliferous indications, which many of these latter, abruptly abutting into or overhanging the Bay of Bantry on the one side, and that of Dunmanus on the other, presented to the eye of the searcher after such manifestations of wealth, imbedded "fathoms deep" within their sides and beneath their surface. This district comprises a promontory between the above-mentioned two nobles, and, from mountain scenery surrounding them on all sides, except at their inlets from the Atlantic Ocean, the most magnificent bays in Europe. Fourmile Water—the head of Dunmanus Bay—is distant four miles from Bantry Town, at the head or inner termination of the bay of that name; and the district in question, known by the name of *Muintervaria*, extends from a line drawn between Fourmile Water and Bantry Town to Sheep-head, the extreme point of the promontory, which is about sixteen miles in length, and varies in breadth from four miles at its land extremity to about two at its centre, and thence gradually narrows to its sea extremity, Sheep-head—one of the wildest headlands on the coast of Ireland. The inhabitants of this promontory are, though in general extremely poor, extremely honest and industrious, to as great an extent as the rapacity of the landlords will permit them to be. This may appear strange; but those who know the south of Ireland, know also that in proportion as the poor tenant improves by his industry his little holding, he holds out a bonus to the landlord to deprive him of it, in order to let it to another for a higher rent—an advance resulting from this poor tenant's industry. This most unjust and heartless conduct on the part of landlords had been practised on this promontory, as we were informed, without hindrance, restraint, or remorse. Hence the extreme poverty of the bulk of its inhabitants. The *Times*' Commissioner makes no mention of his having visited it. He appears to have passed it by on his way from Bantry, direct to the mining district of Skull, where, undoubtedly, he observed as much of the misery of peasant tenantry, as sufficed to expose their sad condition to the world. How can that condition be designated as other than demi-savage? and are we not justified in expressing an opinion, that the introduction of even abundance of the necessities of life amongst them, by giving them employment, and thereby making them independent of their exacting landlords, will change their demi-savage condition into one of comparative civilization? As a proof of the potency of employment in producing such change, we have only to refer to the district of Berehaven, at the western side of Bantry Bay, and directly opposite to the promontory in question. There, about 30 years since, the people were, if possible, more wretched, and, in that sense, more savage, than in the last-mentioned district. The working of the valuable copper mines at Berehaven, in progress of time, has made the people of the district, by affording them employment, comfortable, and, of necessity, caused an improved and extensive cultivation of land; in short, it changed into the aspect of civilisation the rude face of uncultivated nature, which for ages the district, in respect both to the soil and the inhabitants, had worn. Shall we be told that the same results to the soil and the inhabitants of the promontory of *Muintervaria*, will not proceed from the same cause? That the riches of Gurtavallig, and other mines there, will not be participated in by the latter, in remuneration of their labour? and that the soil will not, therefore, be better cultivated, or the waste lands reclaimed? To those who say "they will not," we have no reply to make, except that they are in a state of intellectual demi-savagery, more to be pitied than the physical demi-savagery of the inhabitants of the wild district of *Muintervaria*.

MINING IN SOUTH AUSTRALIA.

We have often had occasion, to draw attention to the mineral wealth of South Australia, and we are happy to find from private letters, that its prospects continue to bear out all that has been said in its favour; the colony in its agricultural and commercial relations is rapidly advancing in prosperity, and new discoveries in mineral riches are continually being made. It would appear that no country is richer in minerals than South Australia. The iron ore is equal to any in the world, yet no person will touch it in consequence of the richer mines of copper and lead. A Captain Bagot bought 80 acres, 50 miles from this, 18 months ago, at 80l., and has since raised 600 tons of copper ore, each ton netting at least 10l. per ton; 300 tons are shipped, the remainder ready for shipment. 100 acres adjoining his mine were put up by Government a few weeks ago; and after competing with a colonial company, they were purchased by Captain Bagot for 2,250l.—22l. 10s. per acre. He states that he would not take 40,000l. cash for the 100 acres. It is calculated that he can raise (net price) 12,000l. per annum. A mine on surveyed land was taken 10 days ago, 160 acres, 160l., one-third of which was immediately sold for 1,000l.

The Government have a mineral section adjoining the Montacute Mine, which all judges here consider would be purchased cheap at 10,000l. The Montacute Mine, 80 acres, was purchased at Government auction, twelve months ago, for 1,500l. Copper and lead ores are daily discovered in all parts of the colony, but surface mines only are saleable. Surface mines are those in which large veins or lodes of ore are seen on the surface, some lodes run on the surface in a line of 10 and 20 acres. So rich and abundant is the surface ore on the Government mineral section adjoining the Montacute, that 10 tons were stolen from it before discovering the thieves. It is not known when the Government will put up this section.

It is extraordinary that the minerals were not discovered sooner. The fact is that, in the days of our prosperity, we only surveyed and bought the richest farming lands. The first mine (lead), 2½ miles from Adelaide, on private property, was accidentally discovered by the wear of the drays on a road at the foot of the hills, exposing the ore buried a few inches under the soil. The first copper mine (Bagot's) was discovered by shepherds bringing to their master the pretty curious stones, as they called them. Captain Bagot being formerly employed in an Irish copper mine, knew their value. Since these discoveries, many persons are exploring, and numberless mines richer than those now worked are known to individuals, who give information in consequence of the change in the system of Government sales—the regulation being sale by public auction, and the discoverers are waiting until the settlers have expended their ready money in the purchase of inferior mines before they apply to survey, and put up the richer mineral sections.

You may suppose the excitement the mines are causing. Numbers of persons will be ruined, but enormous fortunes will be made by many. Cobalt, antimony, quicksilver, &c., are said to be discovered; but the persons showing specimens will give no information. There are slight indications of copper ore found in the wells sunk in the neighbourhood of your country section, 50 or 60 feet deep. The majority of the minerals hitherto discovered, are not in rocky and barren districts, as is the case in most mining countries, but surrounded by sylvan scenes and rural industry, cattle and sheep may be seen grazing and corn waving immediately around the shafts, and consequently holding out prospects of a most prolific return, to the fortunate holders of these doubly productive allotments.

ARTESIAN WELLS.—At the Academy of Sciences, Paris, a paper was received from M. Daubrée relative to the high rate of temperature in an artesian well, at Neuffen, in the kingdom of Wurtemberg. The Count de Mandelslohe, says M. Daubrée, has ascertained in this well a more rapid increase of temperature with the depth than has ever yet been witnessed in any other locality. In most of the artesian wells it has been found that the temperature increased about one degree for every 30 metres, but at Neuffen the increase has been one degree for every 10 metres. The depth of the well is 385 metres, and the temperature at the bottom is 89 deg. 7 min. of centigrade (about 104 of Fahrenheit). The nearest approach to this great exception from the normal state of things is at Monte Marin, in Tuscany; and it is worthy of remark, that in both cases the bottom of the well is still 55 metres above the level of the sea. M. Daubrée thinks that the cause of these anomalies is the ancient heat of the igneous rocks, which being very slow conductors of heat, communicate but a small portion of it to the surrounding strata.

RECENT AMERICAN PATENTS.

[From the *Journal of the Franklin Institute*.]

HOT-BLAST BLOOMERY FORGE FIRE.—For an improvement in the Hot Blast Bloomery Forge Fire: Paul A. Sabatton, Reading, Berks county, Pennsylvania.—On each side of the fire-place there is a large horizontal tube, one to receive the blast of air from the blower, and the other connected with the tuyeres, and these two pipes are connected together for the passage of the air by means of bent tubes in the form of an inverted U, and placed immediately over the fire to have the flame impinge on them. *Claim*.—"I do not make any claim to the applying of the hot blast thereto; nor do I make any claim to the form or combination of the pipes for heating the air, this being the same with numerous others which have been long known and used; but what I do claim as my invention, and desire to secure by letters patent, is the manner in which I have combined said pipes with the bloomery forge fire, by placing them within the chimney immediately over said fire; which chimney is formed in the manner herein described and represented, so as to effect the desired object, without the use of an arch, or of any analogous structure. To this particular combination and arrangement, I limit my claim."

EXPLOSION OF STEAM-BOILERS.—For an improved mode of preventing the Explosion of Steam-Boilers: C. Evans, Pittsburgh, Pennsylvania.—The patentee says—"The nature of my invention consists in the application of the difference in the expansion of two metals or the expansion of a metal so applied as to cause a safety valve to open, to regulate the supply of water in the boilers, to give notice of the fall or scarcity of water, to regulate a damper, to extinguish the fire by letting water spout on it, and to show the relative temperature of the steam or boiler; all of which can be performed by the same machine respectively, and at the time required, or each can be applied separately. *Claim*.—"What I claim as my invention, and desire to secure by letters patent, is the application of the difference in the expansion of a metal, as a means of preventing explosions of steam boilers, in the manner described, or any analogous means producing the same result or effect."

PUPPET VALVES FOR STEAM-ENGINES.—For an improvement in the Puppet Valves of Steam-Engines: Samuel Talbot, Richmond, Virginia.—The patentee says—"The nature of my invention consists in providing and arranging in the centre of the main steam valves a small valve to be opened sufficiently in advance of the main valve, to allow the steam to fill the vacuum between the piston and head of cylinder, and thereby produce an equilibrium of pressure upon the top and bottom of the same, before the lifting rod acts upon it, thereby allowing it to be raised by an amount of power sufficient to raise the weight of the same. *Claim*.—"What I claim as my invention, and desire to secure by letters patent, is the use of the small valves, operating in the centre of the main valves, and by the same motions, substantially as above described; by which arrangement much of the power required to open the valves in the old way, is saved for the direct action of the engine."

MANUFACTURE OF SALT.—For an improvement in the method of Evaporating Brine in the Manufacture of Salt: J. S. O. Brooks, Kanawha County, Virginia.—The object of this improvement is to apply heat to the brine at the top, as it is believed that this improves the crystallisation. *Claim*.—"I do not claim applying heat to the surface of the brine for the purpose of crystallising the salt, as that has before been done, but I confine my claim to the mode herein described of applying the heat to the surface of the brine, as that surface rises or falls, by means of the revolving or floating pipe, constructed and operating substantially as herein described. Its advantages are twofold: first, preserves a low degree of heat in all parts of the cistern; second, is a convenient mode of preventing the currents in the lower strata of brine."

ROPE MAKING.—For improvements in machinery for making Ropes of any Length: Edward S. Townsend, Palmyra, New York.—This patent is granted for improvements on a machine patented by Townsend and Durrfee, on the 6th of January, 1831. *Claim*.—"What I claim as my invention, and desire to secure by letters patent, is the combination of the spindle, the end of which is adapted to the reception of the strand for forming, with the sliding block, or guide, for winding on, after the strand is formed as described, also the combination of the spindle, in the machine for laying the rope, the end of which is adapted for receiving the rope, while giving the after turn, with the sliding block for winding on the rope after it is laid, as described. This invention differs from Townsend and Durrfee's reel, patented in 1830 or 1831, in the following particulars:—In the use of that reel it was necessary when a single length of the walk, or building, was spun in yarns, to lay the same into rope, and reel the same before spinning a second length. In spinning a second length, the threads or yarns were united to the several threads or yarns already finished, by splicing or spinning into them, and so a second part of the rope was made and reeled as before. By this process being repeated, the rope was made of the desired length, but could not be made *patent formed*, without lacing or splicing in the strands of the threads or yarns."

CARRIAGE WHEEL BOXES.—For an improvement in Cast Iron Pipe Boxes for Carriage Wheels: John Huntington, Zanesville, Muskingum Ohio.—The object of this improvement is to cast pipe boxes with a chilled surface by means of a metallic core made in sections that it may be removed from the inside of the box, and admit of the contraction of the metal in cooling. *Claim*.—"What I claim as my invention, and desire to secure by letters patent, is the mode or manner of casting pipe boxes for carriage or other wheels, by the use of the segment core, constructed and arranged and used in the way described for chilling or hardening and finishing the interior surfaces of the boxes."

DOOR HINGES.—For an improvement in Door Hinges: R. B. Varden, Baltimore, Maryland.—One half of the hinge is provided with several wings, a plate, or a segment with holes, to receive the end of a sliding pin, for the purpose of holding the shutter, &c., in any position desired. *Claim*.—"What I claim as my invention, and desire to secure by letters patent, is the arrangement of the bolt or pin in combination with the wings and perforated segments and plate on one half of the hinge, or on the shutter, by which means the shutter or blind can be fastened and held in any position corresponding with the holes or wings, as described."

WROUGHT-IRON CANNON.—For an improvement in the method of making Wrought-Iron Cannon: D. Treadwell, Cambridge, Massachusetts.—The following claim fully explains the nature of this invention: *Claim*.—"I have invented a new and improved kind of cannon, which is formed of a series of rings, or short hollow cylinders, joined together by their ends, in sufficient numbers to form the length required for the cannon."

FUEL COMPRESSER—50l. AND 20l. PRIZES.—We noticed, in a former Number, an artificial fuel, patented by Mr. Corke, which is equally well adapted for domestic as for steam-engine and other furnace purposes—burning at first with an intense white flame, and afterwards like coke. It lights with extraordinary facility, and is remarkable among artificial fuels for its combustible properties, and its economy, as, employed in conjunction with the commonest coal or ashes, it keeps up an excellent fire. So well have the public appreciated this fuel, that the machinery at present employed is not sufficient to meet the demand; and it will be seen by our advertising columns that the proprietors have offered a prize of 50l. for the best, and 20l. for the second-best, compressing machine to be worked by steam. This is certainly a most excellent mode of encouraging mechanical invention, and we only wish that double the time had been given as a fortnight is certainly not sufficient to give competitors fair chance.

ROYAL POLYTECHNIC INSTITUTION.—During the week, both morning and evening, this establishment had a perpetual stream of visitors, who shifted from room to room—now attending to a discourse on experimental science—now watching the immersion of the diving-bell—and now examining a curious piece of mechanism. Atmospheric railways, chromatope, physioscope, microscope, spinning machines, dissolving views, diving-bell and diver, and a number of interesting and very curious things, all had their attractions, and their aggregate power brought mobs of the more rational enjoyers of a holiday. A succession of instructive entertainments was provided, and the lectures of the professors, aided, as they are, by the most costly illustrations, gave a world of delight to the multitudinous auditory. The contents of this gallery are, indeed, extremely varied, and very many hours may be improvingly spent within its walls at any time. Dr. John Ryan still continues his lectures on the potatoes murrain, in which he states the probable causes of the disease, and the means employed to render those already decayed, of service for ordinary purposes. Dr. Bachoffner's lectures on natural philosophy continue to draw crowded audiences, the learned lecturer being highly appreciated. The music is another department which must not be forgotten, the conductor (Dr. Wallis) having for this festive season arranged numerous popular airs with great taste and judgment.

HALEY'S PATENT LIFTING JACK.

MANUFACTURED SOLELY BY
W. & J. GALLOWAY, ENGINEERS,
KNOT MILL IRON-WORKS, MANCHESTER.

The attention of parties who employ LIFTING JACKS, is respectfully requested to the superiority of the above over these hitherto in use. It will lift either at the top or below—having a claw, the same as the rack jack. Its parts are made in the most accurate manner—each working piece being engine-cut. Notwithstanding its superiority, in point of workmanship, and combining utility, safety, durability, and neatness, the cost is not more than that of the rack jack, of rude manufacture.

Amongst the advantages which it possesses, the following may be enumerated:—

1. It is about half the weight of the ordinary rack jack of equal power.
2. This is most important, as the ponderous nature of the rack jack is one of the main objections to it, requiring two, and often three, men to carry one of moderate power; whereas, one of the improved jacks (capable of lifting five tons), can be borne with ease by one man.
3. The handle (working similar to the rack jack) may be let go with the lift on, and although it has neither ratchet wheel, or any other mode of securing it, it will not run back, but remains stationary, and quite safe.
4. Its parts are few, and simple (made entirely of wrought-iron, and case-hardened).

PRICES.

No. 2 size—to lift 2 tons	£6 0 0
" 3 " " " 3 " "	7 0 0
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" 5 " " " 5 " "	12 0 0
" 6 " " " 6 " "	15 0 0

SMOKE NUISANCE—W. & J. GALLOWAY, ENGINEERS,
MANCHESTER, beg respectfully to introduce to the notice of manufacturers, &c., their REGISTERED STEAM-ENGINE BOILER, having for its object the removal of the smoke nuisance, now so loudly complained of and so desirable to abate, and which, by this construction of boiler, is completely attained, independently of any additional air apparatus or attention from the fireman.—Descriptive circulars may be obtained by application to W. & J. Galloway, Patent Rivet Works, Manchester.

HARVEY AND WEST'S

PATENT VALVES,
APPLICABLE TO PUMPS OF EVERY
DESCRIPTION.

The superiority of these valves, as economical in respect both of trouble and expense, has been proved by the experience of their GENERAL USE for more than SEVEN YEARS.

The patentees refer to nearly all the water-works, engineers in the kingdom, by whom satisfactory testimonials have been freely given.

The principle adopted is that of "OBTAINING THE GREATEST WATER PASSAGE BY THE LEAST POSSIBLE PRESSURE AREA," thereby avoiding the great concussion occasioned by the closing of ordinary valves, and the loss caused by lifting in air under them.

Until the invention of these valves (first used at the East London Water-Works), the most economical mode of raising water—viz., by the plunger pump, and the principle of expansive steam, as practised in Cornwall, was impracticable for water-works purposes.

Sketch A shows the manner in which the valves have been applied to air-pumps of steam-engines. Sketch B, the manner of their application to pumps for lifting water.

The Valves are shown open in both Sketches.

Address Messrs. HARVEY AND WEST,
HAYLE FOUNDRY, CORNWALL.
PRINCIPAL MANUFACTURERS
Messrs. HARVEY AND CO.,
HAYLE FOUNDRY, CORNWALL.

PAYNE'S PATENT PROCESS FOR THE PRESERVATION AND IMPROVEMENT OF TIMBER, &c.—PAYNE and LODGE beg to invite the attention of Engineers, Railway Companies, Architects, and others, to the ABOVE PROCESS, and to state that they are prepared to ERECT the necessary APPARATUS in any part of the United Kingdom, where the quantity is sufficiently large to cover the outlay of its removal.—Further particulars can be obtained at WHITEHALL WHARF, CANNON-Road, WESTMINSTER, or at their other stations—FLEETWOOD-ON-WYRE, LANCAIRE, UNION WHARF, SOUTHAMPTON, WISBEACH, CAMBRIDGESHIRE, GUILDFORD, SURREY.

SIR WILLIAM BURNETT'S PATENT, FOR THE PRESERVATION OF TIMBER, CANVAS, CORDAGE, COTTON, WOOLLEN, &c., FROM DECAY.

From THOMAS GRAHAM, Esq., M.A., F.R.S., L. and E., Professor of Chemistry, University College, London.

"After making several experiments on wood prepared by the Solution of Chloride of Zinc, for the purpose of preservation, and given the subject my best consideration, I have come to the following conclusions:—

"The wood appears to be fully and deeply penetrated by the metallic salt; I have found it in the centre of a large prepared paving block.

"The salt, although very soluble, does not leave the wood easily when exposed to the weather, or buried in dry or damp earth. It does not come to the surface of the wood by efflorescence, like the crystallisable salts. I have no doubt, indeed, that the greater part of the salt will remain in the wood for years, when employed for railway sleepers, or such purposes. This may be of material consequence when the wood is exposed to the attacks of insects—such as the white ant in India, which I believe would be repelled by the poisonous metallic salt.

"After being long immersed in cold water, or even boiled in water, thin chips of the prepared wood retain a sensible quantity of the oxide of zinc; which I confirmed by Mr. Topp's test, and observing that the wood can be permanently dyed from being charged with a metallic mordant.

"I have no doubt, from repeated observations made during several years, of the valuable preservative qualities of the Solution of Chloride of Zinc, as applied in Sir W. Burnett's process; and would refer its beneficial action chiefly to the small quantity of the metallic salt which is permanently retained by the ligneous fibre in all circumstances of exposure. The oxide of zinc appears to alter and harden the fibre of wood and destroy the solubility, and prevent the tendency to decomposition of the azotised principles it contains, by entering into chemical combination with them.

(Signed) "THOMAS GRAHAM."

"University College, Oct. 23, 1845."

From Professors BRANDE and COOPER.

"London, November 4, 1845.

"Sir,—We have this day again examined the specimens of canyas and wood prepared according to the specification of your patent, and which, in the month of April, 1844, we placed in a damp cellar, where they have remained up to this date.

"We are now enabled satisfactorily to corroborate the favourable opinion expressed in our former report. The canyas remains amply protected from all fungus vegetation and rot, while a corresponding sample of the same piece, which had not been prepared by immersion in the solution of chloride of zinc, is entirely decayed, being mouldy, rotten, black, and in places resembling putrefaction.

"We have also lately compared the strength of a fibre of a piece of canyas which we prepared according to your specification, in October, 1844, with that of the fibre of the same canyas, unprepared, and find that it has in that respect sustained no injury. We are, therefore, of opinion, that your process will not, after any lapse of time, tend to deteriorate the strength of the fibres of the substances in question.

"In regard to the several samples of different species of wood above adverted to, each of which was cut into two, one-half being immersed according to the directions of your specification with the dilute solution of chloride of zinc, while the other half was left in its original condition, we have also to make a favourable report, and to repeat our opinion of the efficacy of your process as a preventative of dry-rot, and similar sources of decay; the unprepared specimens are manifestly symptomatic of decay and mildew, while those which have been protected by your preparation are clean and sound.

(Signed) "WILLIAM THOMAS BRANDE,"
"JOHN THOMAS COOPER."

"To Sir William Burnett, K.C.H., F.R.S., &c. &c."

Testimonials from numerous other parties may be obtained on application, personally, or by letter to the secretary, and specimens may be seen at the office, 55, King William-street, London-bridge.

KEATING'S COUGH LOZENGES.—A remedy for all disorders of the pulmonary organs—in difficulty of breathing—in redundancy of phlegm—in lacerated consumption (of which cough is the most positive indication) they are of marvellous efficacy. In asthma, and in winter cough, they have been seldom known to fail.—KEATING'S COUGH LOZENGES are free from every deleterious ingredient; they may, therefore, be taken at all times, by the most delicate female and by the youngest child; while the public speaker and the professional singer will find them invaluable in allaying the hoarseness and irritation incidental in vocal exertion, and consequently a powerful auxiliary in the production of melodious enunciation.

Prepared and sold in boxes, 1s. 1d., and 2s. 6d., and 10s. 6d. each, by Thomas Keating, chemist, &c. No. 79, St. Paul's Churchyard, London.

Sold by Sanger, 160, and Dietrichsen and Hanny, 63, Oxford-street; Blake, Sandford, and Blake, 47, Piccadilly.—Sole wholesale by Barclay and Sons, 95, Farringdon-street; Edwards, 47, and Newberry, 45, St. Paul's Churchyard; Sutton and Co., Bow Church-yard; and retail by all druggists and patent medicine vendors in the kingdom.

RECENT TESTIMONIAL. Dover, January 25, 1845.

"I have great pleasure in informing you, that the 2s. 6d. box of KEATING'S COUGH LOZENGES, had at your house about three weeks since, has relieved Mrs. Hiller of a bad cough, to which she has been subject many years, especially in the winter season. A considerable portion of the lozenges are on hand, nor has she, for the last fortnight, had any occasion to use them.

Yours respectfully,
Mr. S. Marten, Dover.

UNDER THE PATRONAGE OF ROYALTY AND THE AUTHORITY OF THE FACULTY.

KEATING'S COUGH LOZENGES.—A remedy for all disorders of the pulmonary organs—in difficulty of breathing—in redundancy of phlegm—in lacerated consumption (of which cough is the most positive indication) they are of marvellous efficacy. In asthma, and in winter cough, they have been seldom known to fail.—KEATING'S COUGH LOZENGES are free from every deleterious ingredient; they may, therefore, be taken at all times, by the most delicate female and by the youngest child; while the public speaker and the professional singer will find them invaluable in allaying the hoarseness and irritation incidental in vocal exertion, and consequently a powerful auxiliary in the production of melodious enunciation.

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Yours respectfully,
Mr. S. Marten, Dover.

THE PATENT GALVANISED IRON COMPANY.—NOTICE.

—This patent was decided by the jury, in Pattenon v. Holland, tried in the Common Pleas in February last, to be invalid, and their verdict has not been set aside. The delay in actually cancelling the patent by the civil courts issued for that purpose, solely attributable to the parties resorting to frivolous and dilatory measures for postponing the proceedings—thus showing that they well know how such proceedings must terminate.

ATMOSPHERIC RAILWAYS.

TO RAILWAY COMPANIES, ENGINEERS, MANUFACTURERS, IRONMASTERS, AND TO ALL OTHERS WHOM IT MAY CONCERN.

NOTICE is hereby given, that the Atmospheric System, included in Pinkus's First and Second Patents, of 1834 and 1836, and which is now about to be adopted on the Croynline, is, nevertheless (although practicable), but a crude and imperfect one of Mr. Pinkus's several systems, and involves an unnecessarily large outlay of capital in the construction, and an unnecessarily heavy expenditure in the annual working thereof; whilst, by Pinkus's new System, only about one-half the expense in constructing, and one-half in the working and annual maintenance, is incurred. The former long valve is dispensed with, and the loss by leakage thereof prevented—one line of pipe suffices for a double line of railway; each train is made to move under the influence of two stationary engines, at the terminal of a section, simultaneously, by which means the amount of motive power is reduced by one-half, yet affording the required amount of propelling power. The stationary engines work constantly, insubduing power at intervals, when trains are not moving, thus inducing much economy. The propelling main is reduced in size, to one-half the capacity required by the former system; yet affording the same amount of propelling power. Trains may be more frequently started, and without danger. And by a further system (being the Atmospheric Locomotive), one line of pipe suffices for a double line of railway; the train, as before-mentioned, moves under the influence of two stationary engines at the terminal of a section simultaneously; the column of air in the pipe does not move with the velocity of the load; the immense loss of power consequent upon friction of air moving rapidly in the tube, is thus avoided; the quantity of air acted upon for an equal amount of propelling power, is only a fifth part of the quantity necessary by the former system—equal flexibility with the common steam locomotive system is obtained, the locomotive atmospheric engines being capable of moving forwards and backwards, as by the steam locomotives, more frequent trains may be run without loss of time, and without waiting for the re-evaluation of the propelling tube, the power of the locomotive is greatly increased on inclined planes, without enlarging the tube, and perfect safety, from the possibility of a train moving off the rails is secured.—These are advantages which Pinkus's other first system, about to be used on the Croynline, does not possess.

Licenses will be granted, and information may be obtained, on application to the Secretary, at the Atmospheric Railway Office, West Strand, Trafalgar-square, London.

Communications addressed to Mr. Alfred Gregory, Sec. pro tem.

PILBROW'S ATMOSPHERIC RAILWAY AND CANAL PROPULSION COMPANY.—Completely Registered.

DIRECTORS.
The Right Hon. the Earl of Bessborough, Lieutenant-Colonel Gillies
G. B. Bolton, Esq. Dr. J. G. Hewlett, Resident Director

Directors of Railway and Canal Companies are informed that this company is now READY TO GRANT LICENSES FOR, OR SUPERINTEND THE LAYING DOWN OF LINES ON PILBROW'S ATMOSPHERIC PRINCIPLE.

The advantages offered by this method of propulsion are cheapness, increased speed, and safety, over every other existing system, whether locomotive or atmospheric. Leakage is entirely avoided, the tube being buried. Also an immense saving, as well in the construction as in the working of lines, not requiring tunnelling, levelling, or embankment. The surface requires but little more preparation than for the common roads.

The application of this method of propulsion to Canal Navigation will be attended with innumerable advantages.

Its superiority, efficiency, and simplicity, will be demonstrated, and explanations given, at the offices of the company, 6, King William-street, London-bridge.

CHARLES COLLINS, Secretary.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

SMART'S ELLIPTICAL CONVEX METALLIC PADDLE

FLOATS, FOR PROPPELLING STEAM-SHIPS.—The very great superiority of this invention over the common float, in all points, having been fully proved by its use on various steamers of from 100 to upwards of 300-horse-power, and applications being made for licensing several iron steamers, from 70 to 300-horse-power, the patentee confidently recommends it to the Government and the public generally.

Its superiority consists, in beauty of appearance, stability, durability, its property of greatly reducing vibration and undulation, inexpensiveness, powerful agency in checking a ship in chance of collision—and what is of the greatest consequence, giving an immense increase of speed. All these must have a powerful influence, not only on steam proprietors, but more especially on the minds of the steam-travelling public.

These floats can be easily applied to any wheel.

Applications for license (for which a fee of 10s. per horse-power is charged) to be made to the patentee, Mr. Robert Smart, 5, Grenville-place, Hotwells, Bristol, or his agents.

THE PATENT GALVANISED IRON COMPANY

call PUBLIC ATTENTION to the following, amongst other GREAT WORKS executed with their patent article:—

THE ROOFS OF THE NEW HOUSES OF PARLIAMENT, at Westminster.

THE SLIPS, OR SHEDS, for building "first-rates," in the ROYAL DOCKYARDS, at Woolwich, Portsmouth, Deptford, &c. (the latter visible in passing down the Thames, and is an object of great beauty, having a centre span of eighty-two feet). The Timber Sheds, and other buildings, in the Royal Dockyards, are also being roofed and constructed with this fire-proof material.

THE BUOYS and other MARINE WORKS of the Honourable Corporation of the Trinity House have for two years been CONSTRUCTED with the Galvanised Iron, which resists effectually the action of sea water.

The celebrated ELECTRIC TELEGRAPHS of Messrs. Cooke and Wheatstone are CONSTRUCTED exclusively with the company's Galvanised Wires, &c.

And this indestructible iron, under all common influences—viz., sea water, saline or damp atmospheres, is admirably adapted for

ROOFING in all climates, being fire, hurricane, and lightning proof, if a continuous communication be formed with the earth by Galvanising the iron, or by attaching to the roof.

DOCK-WORK, chain or wire rope bridges, wire fences, fire proof buildings, corrugated doors, shutters, greenhouses, conservatories, and an endless variety of purposes.

Roofs of gas works and chemical manufactories.

Ship-building purposes—viz., blocks, bolts in lieu of copper, and knees.

For chain rigging, wire rigging, and sheathing, it is extensively used, and the following CERTIFICATE, amongst many others, is affixed:—

Lloyd's Register, London, February 7, 1845.

The undersigned surveyors to this society did, at the request of Messrs. Mullins and Rawlinson, examine the Patent Galvanised Iron Sheathing upon the bottom of the brig Mary Stewart, lying in Messrs. Curlew, Young, and Co.'s dry dock, Limehouse, and lately returned from a voyage to the island of Iceland, on the coast of Africa, and found it unbroken and perfect throughout the vessel's bottom, and no appearance of corrosion or oxide of iron upon its surface. The iron that had been exposed by puncturing the nail holes had become coated with zinc—the sheathing was nearly clean, and free from marine grass and animalcules. It appears to have answered very well during the before-mentioned voyage, and the ship has sailed without it being found necessary to do any repairs to it.

PETER COURTNEY, Lloyd's Surveyors.

I. H. RITCHIE, JAMES MARTIN.

The company are prepared to supply all articles required, or execute work of every description.

WORKS—London, at Millwall, Poplar, near West India Docks; Staffordshire, Phoenix and Lea Brook Iron-Works—from which corrugated iron and every description of iron, galvanised or otherwise, can be supplied; also, from the South Wales Works, near Bridgend, Glamorganshire.

OFFICE—5, Mansion-house-place, London.

CAUTION AND NOTICE.

THIS GREAT PATENT, like every good one, is invaded, and, by the law's delays (and its miserable state as regards the interests of patentees), the parties are able to evade the consequences some short time longer. The same thing has occurred with other patents.

In Nelson's Hot-Blat Patent the invasion went on for years: but one firm only had at last to pay upwards of (£120,000) ONE HUNDRED AND TWENTY THOUSAND POUNDS PENALTIES. BUYERS as well as SELLERS are LIABLE, and the PATENTEE will PROCEED AGAINST ALL PARTIES WHO INVADE this—one of the most IMPORTANT INVENTIONS ever brought into use.

Actions are proceeding against Messrs. Morewood and Rogers, Messrs. Walker (Gospel Oak), and many others.

The company take this opportunity of giving the most unequivocal contradiction to the advertisement issued by Messrs. Morewood and Rogers on 8th August.

PATENT GALVANISED TINNED IRON.

MOREWOOD AND ROGERS' PATENT.

The PATENTEE beg to call the attention of the PUBLIC to the ABOVE METAL, which is being USED extensively by the LORDS COMMISSIONERS OF THE ADMIRALTY, the BOARD OF ORDNANCE, and OTHER PUBLIC BODIES.

FOR ROOFING AND OTHER PURPOSES.

The large WAREHOUSES and SHEDS in the LIVERPOOL DOCKS have had the ZINC with which they were formerly covered STRIPPED OFF, for the purpose of being COVERED WITH IT; and the NEW DOCK WAREHOUSES of that city are likewise being COVERED WITH THIS METAL.

It is peculiarly ADAPTED for RAILWAY STATIONS, as forming a light, strong, and incombustible covering.

THIS PROCESS is the ONLY ONE by which the QUALITY of the IRON is PRESERVED, instead of being injured; and it is, therefore, so very valuable, that it may be worked up with the greatest ease into articles of all descriptions.

Further information may be obtained on application at the WAREHOUSE No. 9, STEEL-YARD UPPER THAMES-STREET.

THE PATENT GALVANISED IRON COMPANY.

—CAUTION.—The public are cautioned against giving credit to the mis-statements put forth by the PATENTEE in their advertisement.

THE ONLY ACTION proceeding in regard to this Patent is one, NOT AGAINST MOREWOOD AND ROGERS, OR ANY OTHER PARTY CONNECTED WITH THEM, BUT A WRIT OF SCIRE FACIAS AGAINST THE COMPANY'S PATENT FOR ITS CANCELLATION.

Nothing can be more unfortunate than the comparison between this Patent and that of Nelson's, which was held by the jury to be valid, whereas THAT OF THE GALVANISED IRON COMPANY WAS, AFTER THREE DAYS' TRIAL, FOUND, UPON THEIR OWN EVIDENCE, TO BE INVALID.

They assert that their Patent is being invaded—this we entirely deny; and to show the folly of the charge, the working of it was found by the jury to be impracticable. No one—not even they themselves—ever have, or ever will be able to work it.

In working as they now do, they have ADOPTED PART OF OUR PROCESS, as effected in our patent, WITHOUT OUR LEAVE OR LICENCE.

With regard to delay, it has been entirely on their part, as the records of the courts will prove. They have availed themselves of every opportunity to hinder and delay the proceedings, now proceeding by the civil courts, for that purpose. Finally, by putting in a plea, which their solicitor swore, he believed, to be necessary for the defence of their patent from cancellation, but which the Lord Chancellor, on Monday last, refused to admit, and dismissed their appeal with costs.

MOREWOOD AND ROGERS, Patentees of Galvanised Tinned Iron. Warehouse, 9, Steel-yard, Upper Thames-street.

PATENT GALVANISED IRON COMPANY.—NOTICE.

—This patent was decided by the jury, in Pattenon v. Holland, tried in the Common Pleas in February last, to be invalid, and their verdict has not been set aside. The delay in actually cancelling the patent by the civil courts issued for that purpose, solely attributable to the parties resorting to frivolous and dilatory measures for postponing the proceedings—thus showing that they well know how such proceedings must terminate.

SHORT LINE OF RAILWAY.—TO BE SOLD.—The

proprietors of PROSSEK'S PATENT GUIDE WHEELS having CEASED to RUN the TRAINS ON WIMBLEDON COMMON, have determined to SELL the LINE, together with the ENGINE, CARRIAGE, TRUCKS, and PLANT; the length of the line is about 1½ miles—the engine is in complete working order, 12-inch cylinder, 18-inch stroke. This may be admirably adapted for any person in want of a short line, and may be removed at a trifling expense, being with a rail of the Thames, and the mode of construction so simple (having no bolts or iron, except a small portion laid with iron rails), that it can be taken up and relaid with great ease.—For terms, &c., apply to Mr. George Hadley, 36, New Broad-street, London; or Mr. C. Capper, C.E., Broad-street, Birmingham.

STEAM TO INDIA VIA EGYPT, MALTA, ITALY, ALEXANDRIA, AND THE PENINSULAR PORTS.

PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA.

The Peninsular and Oriental Steam Navigation Company 3000 PASSENGERS for CYLON, MADRAS, AND CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, on route to Bombay, on the 1st of every month.

A steamer from Southampton leaves the 1st and 20th of every month for Malta, whence are steamers to Naples, Genoa, Civita Vecchia, three times a month.

STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR.

A steamer leaves Southampton on the 7th, 17th, and 27th of every month.

Apply at the Peninsular and Oriental Steam Navigation Company's office, 61, St. Mary Axe, London, where only passages can be secured throughout.

THE PATENT SAFETY FUSE.

FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonials to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.—"I am very glad to hear that any recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Cornhill, Cornwall.

PATENT IMPROVEMENTS IN CHRONOMETERS.

WATCHES, AND CLOCKS.—E. J. DENT, 93, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometer watches, and clocks, is secured by three separate patents, respectively granted in 1835, 1840, 1842. Silver lever watches, jewelled in four holes, 6s. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8s. to 12s. each.

DENT'S PATENT DIPLÉSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use, 1s. each, but to customers gratis.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN.

J. MURDOCH (successor and late assistant to Mr. Hebert) informs INVENTORS and PATENTEEs, that at his OFFICE they can obtain

REFERENCE TO A CLASSIFIED LIST OF PATENTS (THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

GREAT BRITAIN MUTUAL LIFE ASSURANCE SOCIETY, 14, WATERLOO-PLACE, LONDON.

DIRECTORS.
THE CHISHOLM, Chairman WM. MORLEY, Esq., Deputy-Chairman

HALF CREDIT RATES OF PREMIUM.

The attention of ASSURERS is particularly directed to the Half Credit Rates of Premium, by which means assurance may be effected, and loans for short periods secured with the least possible present outlay, and at a less premium than for short terms only, and with the option of paying up the arrears and interest—thus becoming entitled to participate in the whole of the profit of the institution.

Extract from the Half Credit Rates of Premium.

Age 20. Age 30. Age 40. Age 50. Age 60.

£10 17 0 £1 1 1 £1 8 2 £2 1 0 £3 4 2

Thus £1000 may be assured at the age of 30 by the annual payment of £10 17s. 0d. for the first five years.

The whole of the profits divided ANNUALLY among the members, after payment of all annual premiums.

An ample guaranteed capital, in addition to the fund continually accumulating from premiums, fully sufficient to afford complete security to the policy-holders.

Members assured to the extent of £1000 entitled (after payment of five annual premiums) to attend and vote at all general meetings, which will have the superintendence and control of the funds and affairs of the society.

Full particulars are detailed in the prospectus, which, with every requisite information, may be obtained by application to A. R. IRVINE, Managing Director.

CURTIS ON MENTAL AND GENERATIVE DISEASES.

Just published, a Medical Work, in a sealed envelope, 2s. and sent post-paid, for 2s. 6d.

MANHOOD: the CAUSES of its PREMATURE DECLINE.

with plain directions for its perfect restoration; addressed to those suffering from nervous debility or mental irritation, by observations on Marriage, and the treatment of diseases of the generative system; illustrated with cases, &c. By J. L. CURTIS and Co., consulting surgeons, 7, Frith-street, Soho-square, London.

Published by the authors, and may be had at their residence (also sold by Strange, 21, Paternoster-row; Hanney, 63, Oxford-street; Mann, 39, Cornhill, London; Guest, 31, Bull-street, Birmingham; T. Sowler, 4, St. Ann's-square, Manchester; G. Phillips, South Castle-street, Liverpool; J. Clancy, 6, Bedford-street, Dublin; Heffernan, Castle-place, Belfast; W. and H. Robinson, booksellers, Greenstreet, Edinburgh; Love, 5, Nelson-street, Glasgow; and sold in a sealed envelope by all booksellers.

Reviews of the WORK.

MANHOOD. By J. L. CURTIS and Co. (Strange).—In this age of pretension, when the privileges of the true are constantly usurped by the false and fraudulent, it is difficult to afford the sufferer from nervous debility, the means of judgment which he seeks, and the authors of this work have obtained the difficulty. Their long experience and reputation in the treatment of these painful diseases is the patient's guarantee, and well deserves for the work its immense circulation.—Era.

CURTIS ON MANHOOD (Strange).—A perusal of this work will easily distinguish its talented authors from the host of medical writers whose pretensions to cure all diseases are daily so indecently thrust before the public. Its originality is apparent, and its personal breathes consolation and hope to the mind of the patient.—Natal and Military Gazette.

CURTIS ON MANHOOD should be in